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THE LANCET

COUNTER-IRRITATION.

PRINCIPLES AND PRACTICE.

BY

THE LANCET

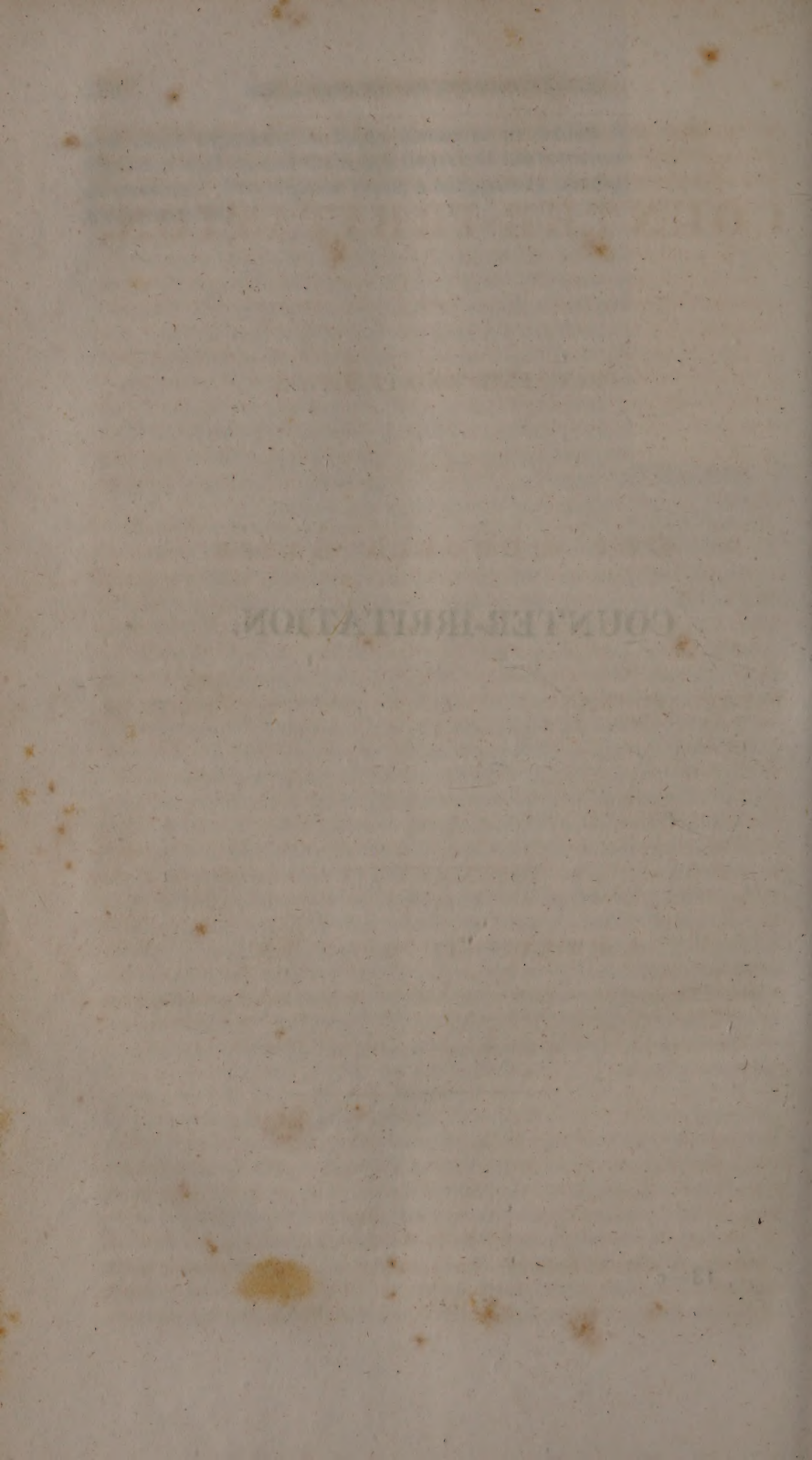
COUNTER-IRRITATION.

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COUNTER-IRRITATION,

ITS

PRINCIPLES AND PRACTICE,

ILLUSTRATED BY

One Hundred Cases

OF THE MOST

PAINFUL AND IMPORTANT DISEASES EFFECTUALLY CURED BY
EXTERNAL APPLICATIONS.

BY

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and other Medical works: Member of the principal Literary
and Scientific Societies of Europe.

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PREFACE.

The present volume contains the result of nine years' experience and meditation on the subject of Counter-irritation; together with a selection of cases to illustrate its principles and practice, as sources of incalculable benefit to patients in the treatment of disease. I address it in a special manner to the general reader, rather than to my professional brethren; because any effort which the medical profession might feel disposed to make, in furtherance of the views detailed in the following pages, would prove abortive, unless the public generally were previously made familiar with the subject, and prepared to understand its true importance, by intelligible as well as indisputable evidence. Of that importance the medical profession are fully aware: they have therefore little or nothing to learn from me on that point. But the public at large being imperfectly acquainted with the question itself, and its principal bearings, require, as a matter of course, to be informed on every subject connected with it.

This then is the task which I have undertaken to perform; and I have done so from a persuasion that few, if any, of my medical brethren have, in the course of the last nine years, had opportunities equally numerous with myself, of trying the merits and value of the doctrine and practice of Counter-irritation.

I have studied to perform my task in a popular, rather than in a learned and professional manner; and accordingly the language I

have adopted, free from technicalities and scholastic definitions, will, I trust, render the subject-matter familiar to the most ordinary understanding. In this way Counter-irritation, as a means of treating diseases without the aid of medicine, or as a powerful auxiliary to it, may stand a fair chance of being properly appreciated. In this way too it will become easy for the medical profession to adopt, more generally than they have hitherto been able to do, the doctrine of Counter-irritation, and extend its application into a wider field of practice.

In addressing myself to the general reader on this important topic, rather than to the faculty, I by no means wish it to be inferred that I can render the former independent of the latter, by explaining all the mysteries of a doctrine which, if properly worked out, will considerably reduce the present enormous consumption of drugs in the treatment of disease. On the contrary,—my object is to make the public feel that it will be to their interest hereafter (seeing the mass of stringent evidence contained in the present volume, purposely written for them) to encourage their medical attendant to act, on all necessary occasions, upon the principles of Counter-irritation, instead of prescribing endless pharmaceutical compositions; and above all, to prevail on him to have recourse to those more potent and successful counter-irritants, the value and nature of which it is the object of the present volume to describe.

So long ago as the year 1832, I promised, in another work of mine, to publish the result of my experience respecting the particular class of counter-irritants to which I have just alluded, and the first idea of which had occurred to me three years before. Considering, however, the very extraordinary influence which those counter-irritants seemed to exercise over many important diseases—an influence which was above that of all other counter-irritants usually employed by the profession; and feeling satisfied in my own mind that the effects, equally rapidly and beneficial, produced by those counter-irritants, in order to be credited by the public, must rest on a more widely-extended experience than I then possessed,—I determined on waiting some years longer, ere I fulfilled

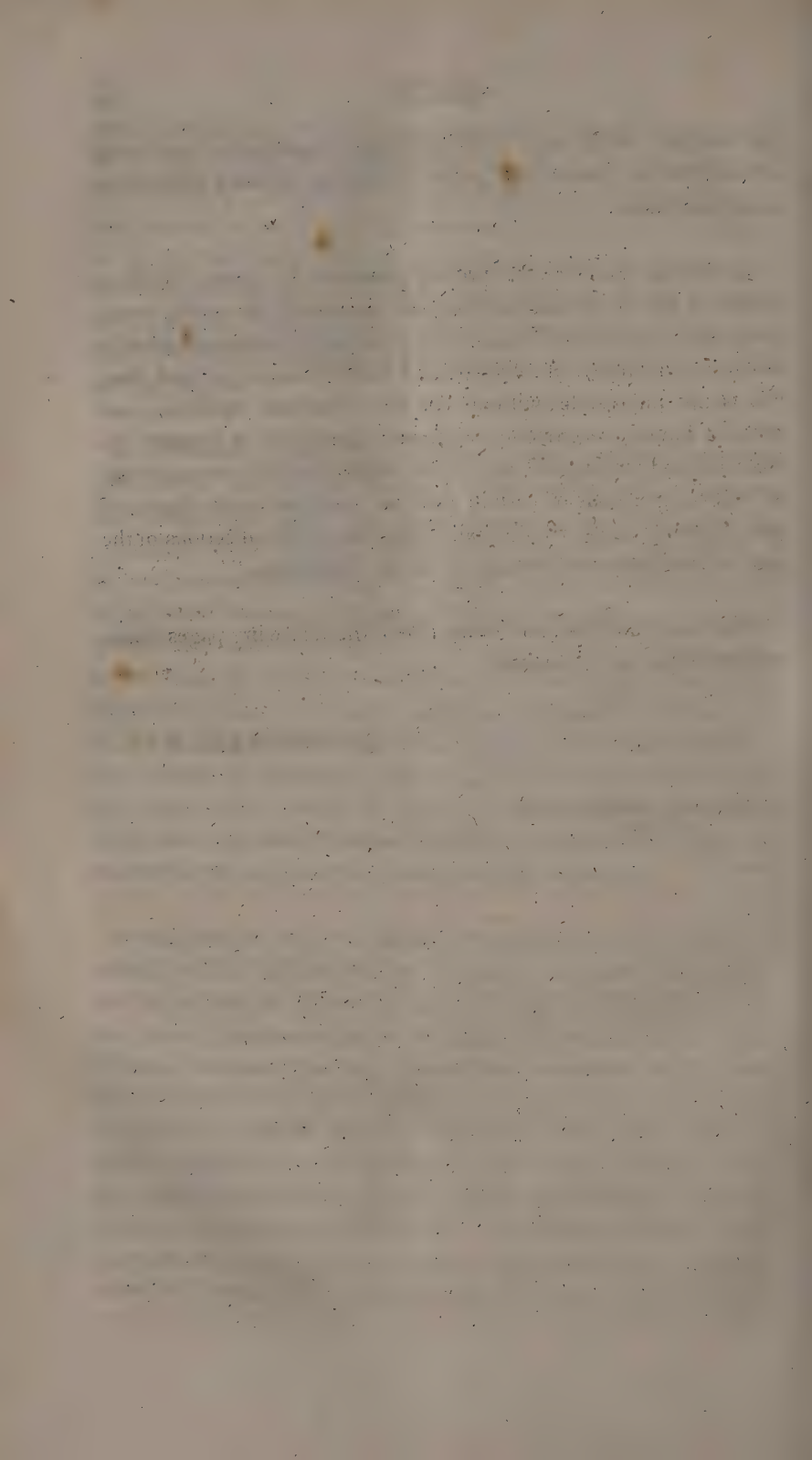
my promise; in the hope of being able to accumulate a large body of evidence in favour of a mode of treating diseases hitherto so much neglected.

In sending, therefore, the present volume to the press, I fulfil, as it were, a species of tacit engagement made with the public many years since; while, at the same time, I adduce the strongest possible testimony in support of an assertion I have often put forward, that, "It is not impossible, without the aid of internal medicine, and without having recourse to poisonous ingredients as counter-irritants, instantly to suspend, and in the majority of cases permanently to remove, by means of certain external remedies, every degree of pain, however acute, which shall depend on morbid affections of the nervous and muscular systems, or of the circulation."

This is my doctrine, and every one of the following pages teems with proofs of its correctness.

A. B. GRANVILLE, M. D.

16, Grafton Street, Berkeley Square,
July, 1838.



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PART FIRST.

POPULAR OBSERVATIONS ON COUNTER-IRRITATION.

SECTION I.

WHAT IS MEANT BY THE TERMS COUNTER-IRRITATION, REVULSION, AND DERIVATION.

Modern adoption of the term Counter-irritation—Substituted for that of Revulsion—Its origin and supposed meaning—The two terms not identical—Revulsion begins when Counter-irritation ends—Neither term sufficient to denote a transference of fluids—The term Derivation adopted for that purpose—Critical analysis of the three terms—Proofs—The terms indicate a certain mode of treatment but not of action—English and French notions differ—External applications proposed by the author—Their effect instantaneous in nervous attacks—Their agency in those cases not explicable by any of the three usual terms—In ordinary cases they will produce the effects implied by those terms.

1. The term COUNTER-IRRITATION, now very generally used in ordinary language, as referable to the treatment of disease, is of a comparatively recent adoption, and succeeded to the more expressive, though antiquated word, "Revulsion."

2. The history of the origin of the term itself contains the most comprehensive explanation of its etymology. When certain disorders, according to the views of some prevailing system of medicine, are supposed to depend on *irritation*—meaning that peculiar action which certain physical agents are known to exert on particular organs, and which consists in *irritating* those organs;—and when it is found that the excitement of a somewhat similar *irritating* action, on another part of the body, by artificial means, cures the original disease dependent on *irritation*;—the action by which the disorder is removed receives the name of COUNTER-IRRITATION.

3. This origin of the word, it is contended, fully explains its meaning. A familiar example will make the thing still clearer. When a degree of internal pain exists in some part of the chest, denoting a low grade of inflammation, it is considered that the part is in a state of irritation. A common blister being applied externally to the pained part, relief is soon obtained, and at last a com-

plete removal of the pain is the result. The blister, at the same time, has produced considerable irritation, and its concomitant, pain on the part to which it was applied. It is therefore fair to conclude, that it is through that very artificial *irritation* that the original irritation or disease was removed; and hence such a sanative agency has been deemed entitled to the distinguishing appellation of Counter-irritation.

4. It is not necessary that the artificial irritation which is set up to produce the cure of an originally morbid irritation, should take place upon or very near the part suffering under disease. On the contrary, it is frequently a preferable and a necessary plan, to excite counter-irritation at a considerable distance from the original seat of the disorder. In this view most of the older practitioners coincided; and as the distance between the natural and the artificial seat of irritation was often very great, those practitioners, who looked to the fluids of the body for an explanation of every morbid symptom, were persuaded that the beneficial effect of the artificial irritation depended on a diversion produced by it in the current of the diseased humours which were running to the suffering part; in other words, that the artificial irritation drew to the spot, where it was artificially excited, the current in question, and thus relieved the part suffering from disease.

5. In accordance with this mode of viewing so curious and important a phenomenon, the significant term of "Revulsion" was adopted to explain it, or rather to denote it. Thus, in that quaint writer, Temple, as quoted by Johnson, we read the following passage, which may serve as an example to illustrate our position: "I had heard of some strange cures of frenzies" (irritation of the brain) "by casual application of fire to the lower parts" (counter-irritation), "which seems reasonable enough, by the violent *revulsion* it may make of humours from the head." Upon which the great Lexicographer offers the following explanation of the word "Revulsion" in his "Dictionary:" "The act of revelling or drawing humours from a remote part of the body."

6. In this limited sense, the term Revulsion would only explain and account for the recovery of such disorders in which there is really a something to "draw out" (*revellere*); and therefore would, if applicable at all, have but a limited application. Another term, therefore, was added to medical language, to denote those cases in which humours were not drawn out, but only made to change position,—as in the case of *dry cupping*, where a force is employed to direct a certain portion of fluids from a part of the body which they seem to overpower with their presence, to that point of the surface of the body to which the instrument is applied. The term I allude to, is "Derivation."

7. Were it the province of a medical practitioner to act the part of a critic, it would be an easy task to show that not one of the three denominations now considered is strictly correct, either when employed singly, to denote action according to the meaning of

each peculiar term, or when used to explain, in a general manner, the action which has been especially assigned to each (2, 4, 6). For, in the first place, it is not always clear that an *original* irritation, as productive of disease, existed in the body, when *artificial* irritation (Counter-irritation) was excited to cure that disease;—neither is it evident, in the second place, that there is ought to “draw out” (Revulsion), when we apply to a part, distant from the seat of the disorder to be cured, a revulsive remedy by which that cure is effected. Lastly, it is still manifest that, where a force has been used to direct fluids to a particular region of the body, with a view to relieve another region labouring under disease,—we have effected that object by merely changing the location of those fluids (Derivation). The reader will not forget, that, in all these observations, I mean strictly to confine myself to what happens in the external treatment of disease.

8. The proof that the three preceding negative propositions are correctly stated, is to be found in what actually happens in practice—I mean in the treatment of disease by the agency of one of the three modes of external medication just described (7). When do we find, for instance, that a blister may be substituted for leeches with equal effect—or dry cupping for a blister? Can each of these modes stand as the representative of the other two? or can the three together be taken as representing, indifferently, the action of each? Were it so, we should be more fortunate than we generally are in the removal of disease by external treatment.

9. It must be admitted, then, that the three terms in question are equally deficient in correct meaning, as well as in just application, individually and collectively; and that, therefore, whichever of them we adopt in practice,—whether that of Counter-irritation, or Revulsion, or any thing else,—we must employ the term as giving only an idea of the means we propose using in the treatment of certain diseases, but not as explaining or accounting for, in a satisfactory manner, the peculiar—the singular—I would almost add, the mysterious agency—through which the cure is effected.

10. With this understanding, it becomes nearly a matter of indifference which term we employ; and hence, while the practitioners in this country have adopted the more vernacular term of “Counter-irritation,” those of France have preferred and adhere to the more classical one of “Revulsion.” In both countries, however, but particularly in the latter, the subject has, within the last ten years, occupied much of the public attention, in consequence of the several endeavours made, by talented and highly respectable individuals, to revive a system of medication which had undeservedly fallen into disuse, except in cases of very acute disease.

11. If ever there was a reason for taking the distinction on which I have insisted, as well as the limitation I have laid down, in the use of terms too indiscriminately employed, it is on the present occasion, when I purpose to introduce to public notice a mode of curing many very important diseases by certain external appli-

cations,—the action of which is, at times, so instantaneous, that the word “Counter-irritation,” implying as it does a sensible duration of action, would seem misapplied. I have, however, adopted it, for want of a more correct and comprehensive expression. Nor is that action, in some disorders, instantaneous only, and therefore different from ordinary counter-irritation;—it is also convertible, according as it is wielded, into ordinary counter-irritation, or into either of the other two modes of action—namely, Revulsion and Derivation.

12. One of the external applications to which I allude I have found to produce four very distinct and well-marked actions—or, if the reader pleases, four consecutive degrees or varieties of the same action. Three of these are identical with the three modes of action already described (2, 4, 6);—the other, or the principal mode, judging only by its manifestation when employed, and by its rapid success, is not comparable to any of them. It stands alone; I believe it never to have been obtained before by the ordinary means of external medication; and its influence on the nervous system admits of only two plausible solutions: that of a *shock* (dissimilar, however, in every respect to that of electricity or electro-magnetism), and that of a rapid absorption of the substance employed. It is not possible to explain what takes place under the almost magic influence of the application alluded to, in all cases of acute pain of the nerves, of spasm, of nervous headache, and of very intense toothache,—unless we adopt one or the other of the preceding solutions. Yet who shall say that either of them is correct or proved? I vouch for the facts, and I offer only conjectures for their solutions. The facts themselves are amply recorded in the sequel of this volume.

SECTION II.

IN WHAT THE AGENCY OF COUNTER-IRRITATION, REVULSION AND DERIVATION, IS SUPPOSED TO CONSIST.

Humoral Pathology and Solidism—The one admits Revulsion, the other Counter-irritation—Doctor Sabatier’s work on “Revulsion”—Agrees with the English writers in defining, but not in explaining, the two terms in question—Example—Effect of sudorifics said to arise from Revulsion or Counter-irritation—Our ignorance as to the real nature of either—The two terms made convertible by the latest English authors—The term “Derivation” exploded—Summary of our knowledge in respect to the general question.

13. When we try to comprehend the mode in which what has been called Revulsion is brought about—and the same is to be observed of Derivation—we find ourselves incapable of coming to a satisfactory conclusion, without adopting as the key to that phenomenon the doctrine known under the name of Humoral Pathology;

by which is meant that theory in medicine whereby the principal disorders of the human system are supposed to depend on—to affect—or to be connected with—the humours of the body. That doctrine, after reigning for a longer period than any other medical theory, was discarded for another, founded on chemical theorems; and this, in its turn, gave way to Solidism—the system principally prevailing at the present time. It was the profession of such a system, that gave rise to the necessity of substituting for the word “Revulsion,” the term which supplies the principal title to this volume;—for the former term, as I have before stated, and the other twin term, Derivation, can only be explained through the agency of the humours; whereas “Counter-irritation” is essentially an effect produced on solids,—although the salutary effects resulting from it seem, in some instances, to depend on some change in the fluids. How then the French, as well as the English practitioners, can reconcile to themselves the use of two such different terms, with two such different meanings, for the purpose of denoting one and the same effect, it is not easy to explain. But the case is so.

14. Looking to one of the most approved of the modern writers on this subject in France, Doctor Sabatier, of Orleans, to whose memoir, entitled “Les Lois de la Révulsion,” a gold medal was adjudged, six years ago, by one of the medical societies in Paris,—we find that he defines Revulsion in nearly the same terms in which Counter-irritation has been defined by the best English writers of the present day. But from the examples adduced by both authorities, as illustrations of their respective position, it appears evident that they do not mean to illustrate one and the same agency on the human body. Yet their definitions are alike.

15. Let us take one of these examples, and see how it is worked out by both classes of writers, to suit their respective purpose. The efficacy of sudorific medicines, say the partisans of Revulsion, may be referred to an excitement of the internal organs, by which fluids are impelled to the skin: that is, the matter of perspiration is *driven* to the external surface, by *irritation* applied to the internal surface of the stomach, &c. Here the humoral pathology plays a conspicuous part. But what say the friends of Counter-irritation on this point? If after a suddenly checked perspiration, which has given rise to irritation of the internal surface of the body, we expose the external surface of it to the counter-irritating effect of increased warmth, either in the shape of a vapour-bath or heated air, an increased action of the perspiring vessels of the skin is soon produced, which first goes to balance, and next to overthrow, the inward irritation, or the cause of disease. Here the explanation of the agency employed requires not the assistance of a supposed transference of fluids; yet who can deny that, in both the attempted explanations, the same train of phenomena is involved, and the same ultimate result?

16. Other general familiar examples might be adduced as a fur-

ther proof of the discrepancy of opinion which exists, in two of the most enlightened of nations, respecting the nature of the agency of Counter-irritants and Revulsive medicines. But it would be a waste of time to prolong the consideration of the subject; inasmuch as it must be admitted on all hands that, with regard to that agency, and the laws by which it is regulated, Counter-irritation, as well as Revulsion, is still like a sealed book to us. Whenever we attempt to define it, we can only refer to and describe its visible effects, as Doctor Sabatier has correctly observed, and we can do no more.

17. What has been stated of Counter-irritation and Revulsion, applies with equal truth to the third phenomenon, "Derivation," already described (6). This term, however, has been completely exploded by the supporters of Solidism; and the signification which the ancients attached to it in order to explain the relief obtained in diseases of the eyes for instance, by the application of a perpetual blister behind the ears—or in certain diseases of the head, by the establishing of an issue or a seton either in the nape of the neck or in the arm—is confined by the moderns to the two other terms so often alluded to. Indeed, by the use made of them at present, the two terms in question have been made convertible expressions—nay, almost synonymous;—as may be seen in the latest medical writers of this country, who employ indifferently, and sometimes both together, as identical, the words "Revulsants and Counter-irritants," in speaking of external remedies capable of promoting Counter-irritation.

18. Our knowledge on this subject, therefore, amounts to this, and no more. A disease which is supposed to be caused by an undue excitement of any specific part of the body, it matters not whether it be internal or external;—or by an exaggerated sensitiveness of that part, which is a second degree of intensity in the exciting cause;—or by positive irritation, which is a third degree of intensity in that cause;—or, lastly, by inflammation even, which is the highest degree of intensity;—a disease so excited may be often cured, sometimes entirely, at other times only partially, by producing undue excitement—exaggerated sensitiveness—positive irritation—and, finally, inflammation,—in another and distinct part of the body.

19. This mode of medication is called "the cure of diseases by Counter-irritation;" the *immediate* effects of which we know to be one or more of the morbid symptoms just enumerated (18), and its *remote* effect we hope and very often do find, to be "the cure" of the disease. But of the manner in which either the immediate or the remote effects are produced, either the morbid symptoms existed or the cure effected, we are totally ignorant.

20. The treatment by counter-irritation is not a pure invention of medical science; it is an imitation of the method which nature spontaneously follows on many occasions, and by which it expedites the recovery of disease. Thus, if in a case of gout affecting the stomach, we succeed in relieving that important organ by means of

counter-irritants applied to the instep or the toes, we do so because we have often witnessed how nature quickly expels a dangerous attack of gout from the stomach, by the appearance of a well-defined, red, tense, and exquisitely painful swelling of the foot.

SECTION III.

WHAT CONSTITUTES COUNTER-IRRITATION, AND OF ITS PHENOMENA AND VARIOUS DEGREES.

Aggregate circumstances constituting artificial counter-irritation—It cannot take place without special changes taking place in some part of the body—Excitement accompanies those changes—The latter are marked by two classes of peculiar phenomena—Phenomena of the first class—They will vary in order and intensity—The whole of them not necessary to constitute artificial counter-irritation—Propriety of carefully choosing—Phenomena of the second class—Morbid symptoms cured—Correspondence between the morbid symptoms and the phenomena of the second class—Enumeration of the latter—Our knowledge of the mode in which the phenomena of the second class act in correspondence with those of the first class, in the case of disease, is quite imperfect—Such knowledge not necessary for the success of counter-irritation in practice.

21. We have just seen that COUNTER-IRRITATION presupposes, on the one hand, the existence of some disease in the human frame, dependent on some kind of irritation (18), and, on the other hand, the application, to some part of the body, of a special remedy or preparation, capable of setting up also some sort of irritation. Of the nature of the morbid irritation pre-existing, and to be cured by that which is artificial, it is not my province to treat. What we have to deal with in the present section is the consideration of those particular circumstances which arise, either at the time, or sometime after the external application of the special remedies or preparations alluded to, and the aggregate of which circumstances has been termed "Counter-irritation;" while the remedies or preparations themselves have received the name of "Counter-irritants." In this plain statement it will be seen that we leave entirely out of sight the question of "In what manner, and through what channel, or by what agency, the artificial succeeds in putting down the natural (morbid) irritation."

22. Artificial counter-irritation, as viewed in the present volume, may be defined to consist in a particular change or deviation from the natural state of a given part of the body, brought about at pleasure, by means of some known substance or mechanical agent applied to that part. Such a change or modification of the part, is invariably accompanied by an exaltation of its vitality, or, properly speaking, in other words, by excitement; nor can there be any counter-irritation tending to have a salutary effect, where there is not excitement also,—either visible to the eye in consequence of

what takes place on the surface of the part selected and the subjacent tissues, or sensible to the patient, from the sensation of pain and other acute feeling of the nervous system, which he experiences. The latter form of development in the excitement in question (consequent on the application of counter-irritants) is of a general character; whereas the first form of it is of a purely local nature.

23. The change or changes (22) produced while counter-irritation subsists, are distinguished by well-marked phenomena, which it will be necessary to enumerate, in order not only to be able hereafter to appreciate their value, importance, and various degrees of intensity, whenever we may happen to meet with them, but also with the view of knowing how and when to create them, and in what manner to increase or moderate them. Without such a knowledge, the powerful agents known under the name of counter-irritants, might, in our hands, become agents of mischief or sources of disappointment, instead of bringing health and satisfaction.

24. The phenomena adverted to (23) are of two orders: first, such as manifest themselves in the part acted upon by the counter-irritants; secondly, those which, as a matter of course, may be expected to take place in the part morbidly affected, in consequence of the production of the first phenomena. These first phenomena are—

- a.* Increase of circulation in the part.
- b.* Greater influx of humours towards it, which will partially remain and dilate the vessels.
- c.* Extrication of heat.
- d.* Redness of the skin.
- e.* Pain.
- f.* Progressive inflammation.
- g.* Vesication or ustion, or destruction of the skin, and sometimes of the tissues under it.
- h.* Serous or purulent secretion from the part, and sometimes sloughing.

25. These phenomena will vary, according to the constitution of the patient, the nature of the part to which the counter-irritant has been applied, and the kind of counter-irritant employed; but all of them may be expected to occur in the order in which they have been enumerated, under the influence of almost any counter-irritant. A common blister, for instance, or a mustard poultice, applied in ordinary cases and under ordinary circumstances, will give rise to the entire series of them.

26. It is not to be supposed, however, that the whole series is necessary to produce complete counter-irritation. Far from it. In some cases, *a* and *b* (24) will be found sufficient, and the disease, for which those two phenomena were set up, will thereby be found much relieved. In other cases, it is necessary to push the action of counter-irritation until the appearance of the fourth and fifth phenomena, *d* and *e*; while in a more obstinate case of disease, especially if it be deep seated, affecting a vital organ, spread-

ing over an important surface, or being of long standing, the additional excitation of the three last phenomena, *f, g, h*, is indispensably necessary to secure a recovery.

27. Independently of the preceding considerations respecting the first order of phenomena in counter-irritation, there is another which must not be forgotten. I allude to the various degrees of intensity of which each particular phenomenon is susceptible, and which call for our immediate attention in regulating our means of treatment. Thus, let us suppose that a practitioner wishes to produce the four first phenomena, and then stop, conceiving them sufficient for the cure of a particular disease; he will naturally apply himself, first, to the choice of the proper counter-irritant to be employed, and secondly, to the strength of its preparation, in order that the first four phenomena, and no other, may be the result. Taking as an example, the case of a sore throat. If I have reason to believe that a counter-irritant, which shall produce the effects *a, b, c, d* (24), will prove sufficient to remove the complaint I treat, I should apply a liniment of sweet oil, with a due proportion of volatile alkali, to the part, rather than an ordinary blister; for with the former I could, without much watching, and in no great length of time, subdue or relieve the complaint; whereas with the latter I might not, without trouble, be able to arrest counter-irritation at the fourth phenomenon, but the three others, on the contrary, might follow, *e, f, g* (24), and follow unnecessarily, as well as disadvantageously.

28. On the other hand, if the sore throat be of such a nature and intensity as to require the help of all the first seven phenomena, and they, too, in as speedy a manner as possible, I should hardly lose time in waiting for the effect of an ordinary blister to produce them; but, on the recommendation of the late Sir H. Davy, who has often mentioned the fact to me, I would rather apply at once a compress imbued with essential vinegar, or, what will be found more effective still, with the ammoniated counter-irritant, which it is the main object of this publication to make known. In either case, counter-irritation, from its first phenomenon (increase of circulation, *a*) to the seventh and eighth (vessication and serous secretion, *g, h*), would be produced in the tenth part of the time that an ordinary blister would require to give rise to them.

29. We are now to turn our attention to the second order of phenomena, occurring in the part morbidly affected, and which we seek to cure; or, in other words, to those which may be expected to take place through the agency of the phenomena of the first order. Here, again, our observations, made in a great number of cases, have enabled us to trace, more or less distinctly, the rise and progress of such secondary phenomena of counter-irritation, and mark their greater or less degree of activity. They necessarily correspond not only with the morbid symptoms intended to be subdued in the diseased part, but likewise with the first order of the phenomena (24), of which they are, in fact, the relative solutions. Thus,

taking the case of the sore throat (27), if we imagine it to consist in the three following morbid symptoms,

1st. Increased circulation in the lining membrane of the superior portion of the windpipe; with

2dly. A greater influx of humours to the part; and,

3dly. A dilatation of the smaller vessels, in consequence of the stationary condition of the blood in them (constituting what is technically called fulness or congestion);

Then, so soon as phenomenon *a* (24) shall have been produced by counter-irritation, the first morbid symptom above described may be expected to be suspended, and the first phenomenon of the second order, to be presently described (30), will occur at the same time. When phenomenon *b* arises, the second morbid symptom will stop, and the corresponding phenomenon of the second order (30) will appear. And by the time that *c*, *d*, *e*, *f*, and *g* (24), shall have come successively into full play under the influence of counter-irritation, the third morbid symptom will disappear, with the occurrence of as many corresponding phenomena of the second order (30) as will be necessary to complete the cure. It were indeed to be desired that matters were always adjusted with such mathematical precision; but, unfortunately, the reverse is not unfrequently the case, and the disappointment of an incomplete recovery will occasionally follow the use of external counter-irritants. Still, even in such cases, the assistance afforded to the physician by that method of treatment, in the production of relief from bodily suffering, is very considerable, and not to be obtained by any other means. Who does not know the infinite service which a strong blister, or other counter-irritant, applied to the side, after bleeding, will yield in the treatment of pleurisy, although, alone, it could not cure the disorder?

30. The phenomena of the second order, namely, those that have been observed to take place in the organs morbidly affected, when counter-irritation is induced on the surface of the body to cure them, while the counter-irritants are in action, are,

1st. A diminution in, or a total suspension of, the existing increase of circulation in the diseased organ;

2d. The withdrawal from that organ of the excess of humours which had been flowing towards it, and the dispersion of the stagnant fluids;

3d. A progressive decrease of redness, heat, and inflammation;

4th. A reabsorption of serous or purulent morbid secretions already formed, after the arrest of their ulterior formation; and

5th. The gradual, though slow destruction of morbid and unnatural growths, enlargements, and tumours in the organs affected, the result of inflammation or other causes.

31. It is hardly necessary to remark, in this place, that in enumerating these salutary phenomena, as the secondary products of counter-irritation, in acute as well as chronic disorders, we ought to guard ourselves against supposing that, in every such

case of disease, effects like those just mentioned, and in the same regular succession, may always be expected to take place. On the contrary, instances will occur in which one only, or two, of those salutary effects can be produced; in other instances, three, or the whole of them; and in a few cases none. Were it not so, the life of man would be spanless; but there are limits to all human efforts made to extend it; and our duty is to endeavour to do so, under those very limitations, with all the means that Providence has vouchsafed us.

32. It will be impossible, after attentively perusing all that has been stated in the present section, respecting the two orders of phenomena which constitute counter-irritation, and the wonderful harmony with which they seem to correspond together, not to be struck with the important fact, that a mighty hiatus—an unfathomable chasm—exists between the two series; or, in other words, that the two ends of a line of corresponding actions are far apart, and do not meet. In order that they might do so, it would be necessary to explain, as clearly as we have explained the phenomena themselves, in what manner, and by what physiological process, the connection of the one series of phenomena with that of the other can be established; we ought to trace the route of that connection, and demonstrate afterwards its inevitable result—namely, the ultimate production of health. But, alas! we positively know nothing on these points; and at the risk of seeming tiresome in repeating, more emphatically than I have already done, the same assertion, I cannot omit acknowledging that in this, as in many other questions connected with the mysterious laws of human existence, medical knowledge is not more advanced in the nineteenth century than it was at the dawn of civilised society. Fortunately, a correct or perfect knowledge of this kind is not necessary to the successful employment of artificial counter-irritation. The French, and some German writers, indeed, have attempted to explain the riddle—to solve the problem; and for that purpose, they have brought into play the doctrine of *sympathies* between parts and organs—between the external structure of the body and the internal—and so forth. Sabatier, the author I have already alluded to, has especially distinguished himself on this point in his work on Revulsion. But what do we know of the *sympathies* themselves, except as regards certain various effects which we imagine (by a reasoning purely metaphysical) to be the product of a particular principle, the nature of which, or indeed its real existence, we are positively ignorant of, although we assume it to be inherent in the human frame?

SECTION IV.

OF THE CONDITIONS NECESSARY FOR THE SUCCESSFUL PRODUCTION AND AGENCY OF ARTIFICIAL COUNTER-IRRITATION, AND OF THE OCCASIONS ON WHICH IT MAY BE EMPLOYED FOR THE CURE OF DISEASE.

Necessary conditions for the employment of artificial counter-irritation—1. An assurance that no other method of cure could be equally successful—2. The employment of a weaker rather than a stronger counter-irritant, where the former is considered sufficiently effective—3. A previous information respecting any peculiar susceptibility of the patient to the action of counter-irritants—How to obtain that information—Striking example—4. A perfect knowledge of the nervous structure of the part intended to be acted upon by counter-irritants—5. A similar acquaintance with the absorbents of the part, which seem to share very conspicuously in the production of certain phenomena of counter-irritation—6. A skilful and judicious choice of the part intended to be subjected to artificial counter-irritation—Occasions on which such an agency may be employed in the cure of disease.

33. It is always to be borne in mind, that before we determine upon treating any disease by counter-irritation, we ought to satisfy ourselves that there exist certain conditions which warrant its use, and the expectation of benefit from it. This precaution is, perhaps, more necessary in this than in any other mode of treatment, because by its very adoption we inevitably occasion a certain quantity of bodily suffering and change in the part acted upon, however short or temporary they be; together with a more or less active interference with the existing harmony of the functions of life.

34. The principal condition is, that either from previous experience in similar cases, or from sound analogy, we shall have come to the satisfactory conclusion in our mind, that the disease to be removed is one which the application of an irritating substance to the skin will wholly or very materially subdue, with a better chance of success than by any other means. Hence, the application of a stimulating and hot mustard poultice to the surface of the abdomen, in a case of moderate inflammation of the peritoneum, will only be proper when we feel convinced that, by its counter-irritating action, productive of heat, pain, and perhaps the abrasion of the skin, the internal malady will give way sooner and more effectually than by means of purgatives and the usual anti-phlogistic medicines taken inwardly.

35. It is a second condition, that a stronger counter-irritant shall not be employed where one of less power may be expected to answer the required purpose. We are not warranted in ordering, in the case of dull inflammation of the liver, for instance, a liniment of tartarised antimony, which will produce severe and troublesome pustular eruptions, ere it can cure the disorder, if the recovery can be effected at a less expense of suffering, though, perhaps, more tardily, by means of the application of a simple ammoniaco-mer-

curial plaster. It will be seen in the sequel of this volume, that although the rapid production of vesication be often desirable in certain complaints, and although such an effect can be produced with perfect certainty by means of the specific counter-irritants which I shall have to mention in the following pages, I have never had recourse to its use in preference to that of a more ordinary blister, if the latter was deemed sufficient for the particular case under treatment.

36. A third essential condition to the successful production and agency of artificial counter-irritation, is the knowledge that the patient to be acted upon is constitutionally susceptible of being affected by counter-irritants, whether generally or under modifications, without deriving permanent injury from them after they have served the purpose for which they were applied. I will explain this by an example. An elderly gentleman was attacked with occasional spasms of the inferior extremities, which, after a few months, subsided into an almost paralytic insensibility of the limbs. As the cause of the disease was properly considered to be constitutional and not local, the most appropriate remedies were given internally by the medical attendant; but with them, the application of successive small flying blisters along both legs was deemed essential. When it came to the turn of the ankles and insteps to receive this application, the blisters were laid on without any particular notice being taken of the appearance of those parts. They were of that marbled, blue, and livid colour, which show either a stagnant circulation, or an ossification of vessels, both of which conditions are essentially inimical to the use of counter-irritants. After two or three repetitions of the blisters, they were given up as seemingly inactive; but in a few days, the part on which those applications had rested became of a crimson colour, and inflamed, the flaccid skin rose, it broke, a sore was formed, and mortification followed. I saw the patient at this conjuncture, in company with a very eminent surgeon, who had been in regular attendance; and I was glad I had seen the case, for it served ever after as a lesson to me. With difficulty the mortification was arrested; and although the sore which was left behind healed at last (though tediously), the paralysis of the limbs remained, notwithstanding.

37. As it is impossible in certain diseases to account for the successful influence which counter-irritation has over them, without supposing that the nerves existing between the part acted upon by the irritants; and that which is the seat of the disease, have been somehow or other implicated in the phenomena produced (24 and 30); it becomes a fourth condition towards our obtaining the successful agency of counter-irritation, that we should be well acquainted with the relation which the nerves of any portion of the surface of the body about to be made the seat of counter-irritation may have with the organ or tissue affected by disease and intended to be cured. Although the nature of that relation, and its mechanism,

be unknown to us, it is an indisputable fact that it exists, and that we see the effects of it every day. Hence, when we are about to set it in motion for the removal of a particular complaint, we should take care to select that part of the body which, through our acquaintance with the anatomy of the nervous system, we consider as likely to afford the most direct and the most abundant manifestation of that mysterious relation.

38. It has been more than suspected that some of the counter-irritating medicaments employed, may, independently of their local effect, assist in producing some of the phenomena of the second order (30) in the organ affected by disease, through the channel of the absorbent vessels. Another condition, therefore, to the ultimate success of the external counter-irritating treatment of disease must be, that where it becomes desirable that the cure sought for should be obtained in a certain degree by the absorption of a portion of the substance employed, we should select a spot to act upon with our counter-irritants, in which the absorbents are known to be in abundance, and select the time for our operation when those absorbents are supposed to be in the greatest state of activity.

39. Lastly, it is a condition necessary to the production of the result so often described in this section, by means of counter-irritation, that we should be well acquainted with the fact, that the same counter-irritant does not act on all the external parts of the body alike, although it may and will stimulate them all, more or less. This is a point of the utmost importance in the external treatment of disease, and one to which the older physicians, when the doctrine of Revulsion, as understood in this country (45), was the ruling doctrine of the day, paid the greatest attention; in consequence of which, they were frequently able to obtain many surprising effects by means of external medication only. No one can doubt, for example, that, in treating a distant and deep-seated morbid organ by means of the moxa, externally applied, the *ultimate* effects of that counter-irritant will be very different if its application be made on the inside of the leg, rather than alongside of the spine; although in each case the *immediate* effects on the part acted upon may be perfectly similar.

40. With regard to the particular occasions in which counter-irritation may be employed, as propounded in the title to the present section, I shall content myself with observing that it will be found useful, and generally successful, in the removal of diseases which primarily affect the solids; and, on the contrary, little, if at all, applicable in disorders of the fluids.

41. There is hardly a malady of the human body, implicating its solid constituents, which does not admit of being, or has not been, treated through the agency of counter-irritation, with the best results. This is an old doctrine; but the advances made in anatomical and physiological knowledge on the one hand, and our improved acquaintance with remedial agents and their virtues when applied externally, on the other, have extended considerably

the adoption of that doctrine all over the continent of Europe, where more attention is paid to it as a system, than has yet obtained with us. Hence, beginning our enumeration with the several affections of the head, including the brain and its membranes; and going on with those of the nervous system, especially such as are accompanied with pain, without omitting those in which the nervous power is palsied; proceeding next to the various disorders of the lungs, bronchia, and trachea—to those of the heart, particularly if of an acute nature—to those that affect the stomach, the liver, the intestines, and the uterus;—with such, also, as affect the muscles, the ligaments, the bones, and the fasciæ, as well as the articular membranes; we find spread before us a vast field of operation for the external treatment of disease; which latter it is the principal object of the present work to render more general in this country than it seems to be.

SECTION V.

OF THE VARIOUS MEANS RESORTED TO WITH A VIEW TO PROMOTE AND SUCCESSFULLY MAINTAIN ARTIFICIAL COUNTER-IRRITATION.

Epispastic, or counter-irritating medicine of the ancient physicians—Opinion of Hippocrates, Celsus, and Galen—Its practice coeval with man—Exists among all the savage as well as civilised nations—Classification of counter-irritants—First class, Mechanical; second class, Pharmaceutical—Their several divisions—General enumeration of counter-irritants—Three successive degrees of artificial counter-irritation—Various modes of putting counter-irritants in action—Number of the latter in the new “London Pharmacopœia” and other publications—Novel mode of exciting counter-irritation in Paris during the late cholera—The Lombard or Milanese counter-irritant—The Asiatic or croton oil counter-irritant—Le Fay, St. John Long, and Dr. Turnbull—Mechanical counter-irritants—Acupuncturation—Moxa—The wooden roller—Description of that instrument.

39. Under the name of *Epispastics* (which, by the moderns has been confined to common blisters or vesicatories), the ancient physicians possessed an almost interminable list of external remedies, capable of producing nearly every species of salutary change or alteration in the human frame labouring under disease. Their operation, therefore, in the estimation of those excellent practitioners, comprehended all those peculiar and direct effects which, in subsequent ages, have been explained on three specific principles (2, 5, 6); and their application was deemed effectual in almost every complaint. The founder of the first Greek medical school,¹ the most classical and learned of the Roman phy-

¹ “Hippocrate a senti toute la fécondité des principes de la médecine epispastique il a fait presque entièrement consister sa pratique en cauterizations, frictions, fomentations, et autres moyens dont il ne cesse de vanter l’usage, et par les moyens desquels il opérait les guérisons les plus inattendues.”—PINEL.

sicians,¹ and the still more celebrated physician of Pergamus,²—who commented on the writings of the former, and eclipsed the latter in reputation, and whose authority in the medical schools lasted until the seventeenth century,—equally practised external medication to an extent greater than that of internal medicine. Most of the means employed by them for that object, have since been discarded or neglected; and the modern science of medicine has reduced those which it still recommends for external use to a very small number indeed. That we have acted injudiciously in so doing, is the opinion of many of the most eminent writers of our day; among whom, the celebrated Pinel observes on this subject, “That a great number of rubefacients (epispastics) have fallen into disuse which ought to have been retained, and that it is to be regretted that a greater number of them should not have been retained; for in the hands of the older physicians, who relied more than we do on *epispastic medicine*, those remedies produced in very many cases the happiest results, such as it would be in vain to expect from any modern internal remedy whatever.”

43. Indeed, stimulating, irritating, or epispastic substances, applied externally to the body for the removal of disease, seem to have afforded in all ages, and from time immemorial, the most powerful as well as the most efficacious means of cure. Recent writers on China—Mr. Davis, for instance—have assured us that the inhabitants of that country not only look to external remedies as the best means of cure, but possess some of the most refined processes for that purpose. Mr. Pearson has stated, in the *Medical and Physical Transactions of Calcutta*, “That, instead of our vesicatories, the Chinese resort to the means of producing counter-irritation, by drawing out and pinching, with the fingers and thumb, the skin and cellular tissue under it, until the surface is completely black. In this manner the commander of a ship is said to have been relieved of a severe headache, and an affection of the chest, under the care of a native female—who, for the first complaint, pinched the side of his neck until it was bruised; and, for the second, performed a similar operation on the side of the body.”—(*Medical Gazette*.) We also know that the Japanese afford evidence of the same fact. Among almost all the newly-discovered populations, whether of the continents of America or Africa, or of the Oceanic islands, the few remedies found in use have been such as are applied externally, for the cure of almost every species of malady. In Europe, every nation, according to its greater or lesser degree of enlightenment, is found to have recourse to external applications or remedial agents, as means of recovery from disease. But these, as it was before observed (42), have been reduced to a

¹ “Quel usage ne fait point Celse des frictions contre la plupart des maladies chroniques?”—PINEL.

² “Galien et ses sectateurs, en adoptant les principes d’Hippocrate sur les *epispastiques*, se laisserent guider par des opinions systématiques, et donnèrent une étendue excessive à ces remèdes.”—PINEL.

very small number; and although the recent revival of the moxa and acupuncturation, and the still more recent introduction of certain new chemical substances rubbed on the external parts of the body in the form of ointments—such as iodine, veratrine, delphine, aconitine, and strychnine—have been added to the modern catalogue of revulsants or counter-irritants, still the total number of those agents, compared with that employed by the ancients, is very limited. In this respect there is an ample field for making useful additions to the list.

44. The various means which may be employed with a view to produce a certain sensible action on the skin and subjacent tissues, in order to obtain therefrom another more important action in some other part of the body, which is to lead to the recovery of health, may be arranged under two classes:

1st, Mechanical; 2d, Pharmaceutical.

45. The first class admits of two divisions, the first of which contains the strictly mechanical: such as—*a*, dry and excessive heat, applied by means of clothes, or other means; *b*, hot air, or pure hot-water baths; *c*, dry frictions; *d*, percussion; *e*, rolling with a series of wooden rings, which the Indians find so useful in rheumatism; *f*, flagellation; *g*, titillation. The second contains those which may be called chirurgico-mechanical: such as—*a*, the application of leeches; *b*, ordinary cupping; *c*, dry cupping; *d*, scarifications; *e*, setons; *f*, issues; *g*, acupuncturation; *h*, the moxa, lately again introduced into the practice of medicine with infinite effect; *i*, metals heated in boiling water; *k*, the same made red-hot (actual cautery); to which may be added galvanism and electro-magnetism.

46. The second class embraces three divisions, extending to a very large number of agents, drawn from A the vegetable, B the animal, C the mineral kingdom. Under the first division (A) we find enumerated, Burgundy pitch, mustard powders, horse-radish bruised, water-cresses; every species of alliaceous roots, such as garlic and onions; capsicum, or cayenne pepper, and common pepper; powdered ginger; and some gums, such as guaiac, elemi, &c.; pellitory, the common nettle, the powder of savin, upright virgin's bower, the meadow anemone, the upright meadow crow-foot, the tobacco leaves, the root of the spotted arum, the mance-nille; the juice of almost all the euphorbiaceous plants, of the wild cucumber, and of other plants; alcohol or spirit of wine, the oil or spirit of turpentine, the spirits of camphor, acetic acid, or essential vinegar, and yeast; together with many more substances, which it would be needless to specify.

47. Under the second division (B) are arranged, 1st, the various species and varieties of acrid flies, generally known by the name of "Spanish flies," constituting the principal element of ordinary blisters; 2d, the acid of ants (*acidum formicarum*); 3d, all ammoniated preparations, such as hartshorn, &c., which I consider to be

more of an animal than of a vegetable or mineral origin—since in the two latter kingdoms very small quantities of ammonia are to be found in combination; 4th, the dung of certain animals, which has been largely used by people in the humbler classes of life, as a curative agent externally applied in disease.

48. In the third division (C) we notice especially, 1, all the so-called mineral acids; 2, caustic potash and soda; 3, the caustic lime; 4, burnt alum; 5, tartar emetic; 6, creosote; 7, nitrate of silver; 8, white oxyde of arsenic; 9, corrosive sublimate; 10, mercurial preparations, known by the names of the white and the citrine precipitates, also the red precipitate; 11, muriate of antimony; 12, acetate or the sulphate of copper (verdigris and blue-stone); together with a few others. In this division I have no hesitation, from the experience I have had of them, to place also some of the thermal mineral springs of Germany, of which I have given an extended account in another and a recent publication; and especially those of Baden-Baden, Gastein, and Toeplitz.¹

49. On looking at these lists, it cannot be denied that the resources which the endermic physician, or he who treats diseases by external applications to the skin, might command, are not inferior to those of the ordinary physician who relies principally on external remedies. Those resources or agents for internal application would afford him the means of producing on the human body three several and successive degrees of artificial counter-irritation, by simply attending to any existing difference in the respective energies of the agents employed, or to the manner and length of time of their employment; or, finally, to the various modes of preparing those agents for use.

50. The three several degrees alluded to are—1, rubefaction; 2, vesication; and 3, cauterisation. The first name has been applied to the redness of the skin—preceded by tingling of the part, and attended with a moderate degree of pain—which results from the application of counter-irritants of inferior power; as is the case when we apply a common mustard poultice for an hour or two to the skin, or an ordinary blister plaster for two or three hours only. The second denomination implies, as it is well known, an ulterior progress in the action of the counter-irritant, whereby the cuticle is raised from above the true skin, and serum is thrown out by the exhaling vessels of the latter, which can only escape by the bursting or division of the former. As to the third name, it signifies that, the cuticle or outer skin being once removed by the first impression of a counter-irritant, the true skin under it is next damaged or ulcerated, and a process of destruction of some of the tissues beneath it follows.

51. The manifold counter-irritants of the second or pharmaceutical class (46, 7, 8), which are capable, as has been stated (49), of producing the three several degrees or modifications of counter-

¹ The Spas of Germany, 2 vols. 8vo., 1837.

irritation, are employed in a variety of ways, constituting, in practice, almost an art in itself, and forming a special department of endermic medicine. These ways or methods are known under the names of Lotions, Embrocations, (Epithema of the older physicians,) Liniments, Pomatums, Cerates, Ointments, Plasters, Cataplasms, Medicated Frictions, Medicated Baths, Gases or Medicated Vapours—the several meanings of which are too obvious to need any explanation.

52. There is scarcely a writer on medicine, or a pharmacopœia, or a collection of prescriptions for domestic use, in which we do not find one or two receipts for some of the preceding preparations, to be used as remedies against acute as well as chronic disorders. The London Pharmacopœia contains not fewer than twenty-four such preparations, under the denomination of cataplasms, cerates, lotions, liniments, plasters, and ointments. Many are mere rubefacients; others vesicatories, and a few cauteries. The most powerful of the counter-irritants contained in that work is the compound camphorated liniment, in which a solution of ammonia, of the specific gravity of 0.960, plays the principal part.

53. In addition to the systematic and regular compounds, used in the practice of medicine as counter-irritants, to be found in the Pharmacopœias of every civilised nation, (and it is curious to remark that each possesses one or two of such compounds peculiar to itself,) we often meet in medical authors the composition of some one which is supposed to act in an especial manner. Thus, during the prevalence of epidemic cholera in Paris, the French seem to have derived great benefit from the application of the following counter-irritant to the back. “Take a long piece of woollen stuff, of the length of the back of the patient, and one inch wide. Soak it in a mixture of eight parts of spirits of turpentine, and one part of a solution of ammonia, and apply it along the spine. Over this lay a slip of cloth wrung out of hot water, and then pass along it a laundress’s iron, made sufficiently hot to cause the fluids to be volatilised and the cloth to become dry. Perform the same operation every hour until the desired effect is produced.” I have used this process with success during the cholera in London; but its complicated nature is objectionable, and occasions great loss of time.

54. Some medical practitioners in Lombardy, particularly at Milan, are in the habit of employing the volatile oil of mustard, dissolved in a due proportion of water, in order to produce rapid vesication of the skin. The oil is prepared in a particular manner, from the flour of mustard. When applied to the skin it raises a blister immediately, and when diluted, and applied by means of a compress, it will blister the skin in two minutes.

55. A receipt was circulated some years ago, capable of producing pustular eruptions as a counter-irritant, by a speedier mode than by using the tartar-emetic ointment. It consisted in mixing oil of croton with alcohol and a solution of ammonia, in given pro-

portions, which, when rubbed on the part, was said to give rise almost immediately to the elevation of pustules. If the application was made over the abdomen, it also produced a cathartic effect.

56. I need not allude in a special manner to *Le Fay's pommade*, which is supposed to consist principally of hellebore (*veratria*), and is sold as a patent medicine; nor to the method of the late Mr. St. John Long, who is believed to have employed the milky juices of euphorbiaceous plants, diluted with gummy mucilages. Nor, lastly, need I refer to the several pomatums or ointments charged with *veratria*, *delphinia*, *strychnia*, &c., which have been used in the French hospitals, with various and disputed results, for the last ten years—as I can testify from having witnessed their employment in those establishments—and which have since been brought into notice in this country by Dr. Turnbull. The least that can be said of these various modes of producing counter-irritation, in the several cases of disease for which they have been recommended—such as *tic-douloureux*, *rheumatism*, *sciatica*, *headaches*, and diseases of the visual organs—is, that they are uncertain in their operation, often producing no sensible effect whatever; while, in a great many instances, they have given rise to serious and formidable symptoms. At the same time it is impossible to deny that good effects have resulted from the use of the several external remedies here alluded to; and I can bear witness to more than one example of that fact, as connected with the practice of the late Mr. St. John Long, and with the use of *Le Fay's pomatum*; also with the employment of the remedies eulogised by Dr. Turnbull. But that they are dangerous preparations is an undeniable fact, because their poisonous principles may be absorbed into the system.¹

57. In reference to the use of the principal counter-irritants of the first class, or the mechanical (45), I shall confine my remarks to two or three of them, as deserving particular attention; although they have not been sufficiently appreciated in this country, notwithstanding the strenuous efforts made to bring them into more general notice. I allude, first, to *acupuncturation*; secondly, to the *moxa*; and thirdly, to the *rollet*. It is curious, that, for the discovery of each of these three modes of producing counter-irritation, we are indebted either to the Chinese or the Indians—the honour being disputed by those two nations.

58. *Acupuncturation* found, a few years ago, a very able expounder and panegyrist in Mr. Churchill, who at one time had much practice, and met with considerable success with it in London. Why it is now again suffered to lie dormant, it is not easy to explain, except on the old principle, that no classes of people are more fickle and changeable in their likes and dislikes, their patronage and their discountenance of peculiar medicines and treatments, than the influential classes of society in England, and especially in the metropolis. Their judgment or determination of the merit and

¹ See Part 2, History of Cases, section 1.

value of any particular fashion or passing object of attraction, especially in medicine, is guided by *gregarious* instinct, and seldom by their own native good sense. Mr. Lawrence, in his surgical lectures, remarks that acupuncture had been found useful in certain obscure painful affections, and in rheumatism, "but that it was now out of fashion."

59. The moxa is making some progress in the hospitals in this country, and is very little, if at all, adopted in private practice; yet, according to a very great authority, Baron Larrey, we deprive ourselves of one of the most powerful auxiliaries in medicine by neglecting the moxa. I find it stated, by the same eminent surgeon and physiologist, that the moxa is considered by him as a more powerful remedy than the issue or seton; and that, viewing it as a species of actual cautery, it is a powerful agent, and perhaps too much neglected in this country. Let us hear from a most worthy historian of their country, what the Chinese think of the moxa. "The Chinese physicians," observes Mr. Davis,¹ "reckon the application of the moxa or actual cautery among the most effectual means for the alleviation of local pain. Their moxa is prepared by bruising the stems of an artemisia, called *gae-tsaou*, in a mortar, and then selecting the most downy fibres. These, being set on fire upon the part affected, are said to consume rapidly, without producing any severe pain." It will be recollected that Sir W. Temple has recorded, in a very clear and able manner, his own recovery from gout, by the use of the moxa, agreeably to the Chinese fashion, the materials of which he had obtained from Batavia. In a subsequent part of the present volume I have described a mode recently adopted by the French, for raising an instantaneous blister; a mode which ought properly to be considered as a kind of moxa, and as such deserves to be mentioned in this place. For obvious reasons, however, I must refer for a description of it to the concluding part of the last section.

60. The rollet, or wooden roller, is an instrument of ancient date, and of general use among the natives of some of the southern parts of India, for the cure of rheumatic and muscular pains and swellings. Its introduction into this country for the same purposes is comparatively recent. The simplicity of the apparatus, the ease with which the patient himself can employ it, and the agreeable sensation it produces in the muscles, are its best recommendations. I have had no experience of its real utility, but I am assured, on good authority, that some of the lamest and the most painful limbs have been restored by the persevering use of the rollet, and nothing else. This little instrument consists of a wooden rod, nine or ten inches long, and an inch thick, perfectly smooth, on which are placed from four to six thick rounded and polished rings, of the same material, an inch and a half in diameter, and so arranged as nearly to fit the rod, yet left sufficiently free to roll over it and

¹ History of China, by H. Davis, 2d ed. 12mo. 1836.

round it on the slightest movement or pressure being made. They are put on at the end, opposite to that which serves as a handle for the patient to hold the instrument by, and are retained by a brass smooth button. When the instrument is applied to a part suffering from rheumatic pain, and a slight pressure is made on the part by means of it, at the same time that the instrument is moved backwards and forwards, the rings roll round the stick, and produce a peculiar friction, pressure, and shampooing-like effect, (for it partakes of a little of each,) which is by no means disagreeable, and which in due time relieves the disease.

SECTION VI.

OF AMMONIATED COUNTER-IRRITANTS, AND PARTICULARLY OF ANTIDYNOUS LOTIONS, A SPECIES OF POWERFUL EXTERNAL APPLICATIONS, CAPABLE OF PRODUCING ALL THE PHENOMENA OF ORDINARY ARTIFICIAL COUNTER-IRRITATION, AND SOMETHING MORE, WHICH THE USUAL COUNTER-IRRITANTS HAVE HITHERTO FAILED TO PRODUCE.

Rapidity of action in counter-irritants necessary in many cases—Must not be accompanied by serious local disturbances—Examples of the cauterity and strong ammonia—The kind of rapid action required, specified—Acknowledged want of the latter in the ordinary counter-irritants led to the composition of the antidynous lotions—A reason for the same—Nature and effects of the lotions—Their extent of power—Conjecture as to their mode of action—Their superiority to other counter-irritants, both as a vesicant and as a remedial agent.

61. Large as the list of counter-irritants given in the preceding section may appear, there is probably not a medical practitioner, accustomed to use them in the treatment of disease, who at some period or other has not experienced either a total failure, or some disappointment in his expectation of cure, from their employment;—not because the disease to be cured demanded something different from external treatment, but because none of the external agents at his command were rapid enough in their operation.

62. In making such a remark, it is not intended to assert that among the several mechanical, or chirurgico-mechanical, or even among the pharmaceutical counter-irritants, there are none to be found which will produce instantaneous action. On the contrary, many such there are; as, for example, the actual cauterity, boiling water, mineral acids, strong liquid ammonia, &c. But in all those cases in which these agents are employed, other effects, besides the rapidly evolved counter-irritation, are produced at the same time, which are deemed injurious instead of being salutary, and which therefore interfere with the simple and direct effect required. Thus, speaking of the actual cauterity, or the application of a red-hot iron to the skin, the action resulting therefrom is truly instantaneous;

but, at the same time, we have an equally instantaneous destruction of the two skins, a disorganisation of the tissues beneath them, and an eschar, or crust, which, upon being removed, leaves a suppurating sore.

63. Again, if we apply the strongest solution of ammonia—say, for example, the one admitted in the new Pharmacopœia of London, of the specific gravity of .882¹—we shall obtain, no doubt, an instantaneous impression on the skin, but along with it we shall have also the inconvenience of charring the cuticle instead of raising it; whereby, as in the case of the eschar produced by the hot iron (62), some of the more delicate effects of counter-irritation, especially the one desired, are arrested. We might observe the same thing of the strongest mineral acids, when used as counter-irritants; and the like remark applies still more forcibly and truly to all the preparations of Spanish or blistering flies, which are sold under various forms and denominations, as external means of cure from rheumatism, lumbago, palsy, extreme debility, &c. Of the latter preparations, we are acquainted with not fewer than one hundred and three, under the forms of extracts, ointments, cerates, liniments, plasters, tinctures, infusions, decoctions, injections, balsams, syrups, oils, ethereal solutions, &c. &c. To them must now be added the *cantharidine*, or the essential vesicating principle discovered by Robiquet, of Paris, in the Spanish flies, which has not yet been admitted into as general a use as it deserves in medical practice. The single observation I have to make respecting every one of these counter-irritating preparations, is this—that as it is impossible to fix or determine the precise dose of the powerful agent contained in them, which will enter or affect the animal system when used externally; so we cannot predicate the quantity of effect it will produce beyond what may be desired—particularly on such parts of the constitution as ought not to be affected at all, and which cannot be affected by the said agent without material injury. The utmost caution, therefore, is necessary in the use of all such counter-irritants; whereas the ammoniated preparations I recommend are neither obnoxious to such objections, nor do they require any such caution.

64. Now, the species of instantaneous action required from any external application, is that which avoids the two extremes described (62, 63), and which, while it apparently gives rise to no more than the ordinary phenomena of counter-irritation, produces at the same time on the disease under treatment a peculiar and wished for effect,

¹ It seems somewhat singular that the new Pharmacopœia should have admitted a stronger solution of ammonia without defining any process by which it is to be obtained, while it details the mode of preparing a weaker solution of the same substance; which, after all, it is said, may be extemporaneously obtained by reducing the strength of the former through the addition of more water. It would have been more regular, therefore, to have given a descriptive process of the strongest solution, and stated that the weaker consisted merely in diluting the strongest with water.

seemingly dependent on the instantaneous transmission of the counter-irritating influence, from the seat of the counter-irritant to the seat of pain. Such an action was not, to my knowledge, to be found in any of the hitherto known counter-irritants.

65. This deficiency induced me, about nine years ago, to study more minutely the effect of particular agents on the skin, especially such as belong to the ammoniated and spirituous class, with a view of endeavouring to discover some combination of them, which should give rise to an instantaneous and powerful action on any disease likely to be benefited by counter-irritation, even before the part itself, on which the external application was laid, could feel its disturbing effects. Some personal experiments made on myself, in the first instance, with simple as well as compound preparations of ammonia, spirits of wine, vegeto-aromatic spirits, camphor, and other stimulating and evaporable substances, differing from the few preparations already in use, and combined with water, or with oils, or butyraceous vehicles, or saponified into cerates—which experiments were afterwards repeated with the greatest success on some of the patients of two of the public medical institutions I belong to—led me to the knowledge of the fact, that, by merely regulating the several proportions of those ingredients, according to the nature and intensity of the case we have to treat; and, what is even more important, by mixing those proportioned ingredients in a particular order, instead of at random (paying due attention also to time,) combinations of a more powerful kind than usual could be obtained. I found, in fact, that without charring the skin, or producing an eschar, such combinations would, on a mere application to the external surface of the body, give rise to peculiarly energetic effects on the disease, in the brief space of a very few minutes (sometimes seconds only,) without necessarily producing at the same time rubefaction, vesication, and cauterisation;—although, if sufficient time for the purpose were allowed, the same combinations would produce the latter phenomena also, besides the mere first impression.

66. As the nature of that first impression, in all cases of pain, was ascertained to be an instantaneous removal of the pain itself—even where no other effect or phenomenon was required or permitted to arise from any of the applications in question—I gave to this class of counter-irritants the generic name of *Antidynous*, and, as such, I have been in the habit of using them very extensively during the last nine years,—as will be seen from the cases to be hereafter detailed.

67. But a very erroneous notion would be conveyed to the mind by such an appellative as the above, if it were supposed for a moment, either that the effect of instantaneously removing pain where it exists (which is a positive fact) was always a permanent effect of the antidynous applications, or that no other very striking effect could be produced by them worthy of being denoted by a particular name. Neither is the case. The *antidynous* applications relieve, suspend, and oftener than any other external application, remove

pain altogether ; but in some few instances the pain returns, to be again removed by the same application, and only for a short time. This is the case in an especial manner in those agonising attacks of Tic, dependent on *organic* mischief done to the nerves or the brain, in which the cause is continually in action. Here the pain is, at every attack, suspended by antidynous lotions ; but it returns again, though at longer intervals. No so in tic douloureux, which is the consequence of sympathetic action between certain organs—such as the stomach, for example, and the series of nerves affected with pain—for then the relief produced by those preparations is permanent.

68. But the relief of pain, in a manner almost magically rapid, is not the only phenomenon produced by antidynous or counter-irritating lotions. Another very striking characteristic of them is that of raising, if necessary, in a few minutes, a complete and genuine blister, equal to that produced by the best blistering ointment after several hours' application, or by scalding water, but accompanied by pain much less intense in degree, and much shorter in duration. Indeed, such is the advantage of this peculiarity of the counter-irritating applications in question, and so generally have patients availed themselves of it, that the name of vesicating agents might, with equal justice, have been applied to them. The first, however, of the two important effects produced, being, in my opinion, paramount to the second, which is not always desirable, I determined on the adoption of the qualificative I have selected ; a name I have often exchanged for that of "ammoniated," in consideration of the principal ingredient contained in the preparations.

69. If I were asked in what consists the peculiar action exerted on the human body by antidynous applications at the first moment of their being used—or how it is to be accounted for, or explained—my answer must be, "Nescio"—I know not. But conjectures might be offered, and not a few, some of which bear the semblance of plausibility. To one who has witnessed, some hundreds of times, the instantaneous effect alluded to, the irresistible conclusion which forces itself on his mind is, that the ammoniated application, on being first laid and pressed on the cuticle, acts on the nervous papillary terminations, which it deadens. In that case, it must further be conjectured that, just in the same manner as the pricking or irritating of the extremity of a nerve, gives rise to pain and irritation at its other extremity, so when the one (say the cutaneous) extremity of a nerve is deadened by any external agent, that effect is continued or projected to the other extremity, in which lies the morbid pain to be relieved. Thus, in the case of the Countess of —, an attack of spasm of the most painful character, which used to begin at the lumbar, and thence ascended to the dorsal, and lastly to the cervical nerves, and which invariably lasted three or four hours each day, was stopped in thirty-five seconds after the application of an ammoniated lotion, of suitable strength, and did not recur again for a period of seventeen days. The application, in

that time, had not even produced heat; much less rubefaction; and yet all pain ceased, not only in the parts nearest to the application, but also in the most remote parts of the spinal column. Can such an effect be accounted for otherwise than by such a conjecture as the one offered above—or by another, which would make the effect to depend either on the absorption of the volatile particles of the ingredient used by the ordinary absorbent vessels—or on the transmission of such volatile particles along the sheath of the nerve implicated in the disease, just as the electric fluid travels and is transmitted along the surface of metallic tubes?

70. Be that as it may, the fact is certain and indisputable, nor can there be the smallest fear of contradiction to the asserter of it—that the antidynous preparations described in the present section, independently of the ordinary phenomena of artificial counter-irritation—independently, too, of a more rapid and successful vesication of the skin, affording an immense resource in medical practice during seasons of imminent danger—produce a something more which the ordinary counter-irritants have hitherto failed to produce—and must be considered therefore as a most important addition to that class of remedial agents among which they stand pre-eminent. I may add, likewise, that in not a single instance of their application under my immediate notice have I witnessed the smallest injury done to the part; although, on a very few occasions, either through design or neglect, and not unfrequently from an inopportune and injudicious use of them by persons unacquainted with their real power, extensive vesication, and an abraded, ulcerated surface, have been produced, where no such results were required or desirable.

SECTION VII.

OF THE OCCASIONS ON WHICH THE ANTIDYNOUS OR COUNTER-IRRITATING APPLICATIONS HAVE BEEN EMPLOYED; AND ENUMERATION OF THE DISEASES SUCCESSFULLY AND UNSUCCESSFULLY TREATED BY THEM.

Principal occasion: spasmodic and painful complaints—Instantaneous effect of the applications in such cases—Second occasion: muscular and tendinous affections of the body—Effect of the applications slower but not less beneficial—Third occasion: morbid affection of the circulation—Effect of the applications in them—Fourth occasion: anomalous diseases—Fifth occasion: disease of a mixed character—Sixth and last occasion: accidental and mechanical derangement, and some few diseases of the skin—Detailed list of the diseases treated by the counter-irritating or antidynous applications—Specification of those in which the same appeared to be inefficient.

71. The peculiar external applications mentioned in the preceding section, have been used on many and very different occasions, by myself, and, under my direction, by other medical practitioners in

the metropolis and in the country. The report of their success agrees with the result of my own larger experience respecting them, and our joint observations go to establish certain indisputable facts and principles, in regard to their applicability, which it will be proper to explain more distinctly.

72. The principal occasion on which I have had ample opportunities to try the effect and avail myself of the benefit of antidynous lotions has been when any of the spasmodic and painful complaints arranged under the class "nervous" presented itself to my notice. The nervous system, indeed, appears to be in a very special manner the most suitable field for the first and extraordinary impression produced by the counter-irritants under consideration. Their effect is often instantaneous, and in most cases, permanently advantageous. Indeed it was in a case, of the most inveterate as well as agonising character, of this class of disorders, that I first prescribed a suitable combination of ammoniated and spirituous and volatile substances, with a view to produce successful counter-irritation, without any local disintegration of the part on which the substances were applied. That case will be found at the head of those I have recorded in the present volume. The cases of disease on which I had acted before, with something analogous, and in its nature approaching to the compound camphor liniment of the P. of London, or to the opodeldoc, were likewise of the nervous class; but the counter-irritant then employed was not what it became afterwards, in the peculiar case alluded to, when it received its final completion at my hands.

73. The second occasion for using an antidynous or ammoniated lotion with effect, was in cases of disease affecting the muscles of the body, the tendinous tissues, and the membranous expansion connected with the muscular structure. The efficacy of the ammoniated counter-irritant, in such diseases, is not so instantaneously developed as in those of the nervous system, nor can it be obtained (in the majority of instances at least) without going through the first and even the second stage of ordinary artificial counter-irritation,—namely, rubefaction and vesication. Nay, in this class of disorders, when a considerable time has elapsed between their first appearance and the moment of treating them by counter-irritation, the third stage or phenomenon of that agency, on the part to which it is applied, namely, cauterisation, becomes necessary.

74. Certain diseases or morbid affections of the circulation, have afforded a third occasion for the employment of the new counter-irritants. Here also, not only the first impression or shock is required, but one or more of the subsequent phenomena of counter-irritation are indispensable to the production of salutary changes. In some instances, indeed, it is absolutely essential to the ultimate recovery of the patient, that the third phenomenon (cauterisation) should be developed, and not only developed but kept up for some time; an object, by the way, which can more readily be attained by an antidynous lotion than by any other known counter-irritant.

75. There are some anomalous or indefinable cases of disease, which after having resisted every well established mode of medical treatment, have at last been subjected, in despair as it were, to the action of antidynous applications. A fourth occasion, therefore, was thus presented, for a careful trial of those counter-irritants, which terminated in most instances successfully.

76. Finally, mixed cases of disease, partaking at one and the same time, in their nature or character, of two, three, or more of the classes of disorders already specified (72, 73, 74,) have offered a fifth occasion for resorting to the use of the same counter-irritants, with variable success; and a sixth occasion might be added, of certain accidental and mechanical derangements in parts of the body, as well as of a few of the more ordinary complaints of the skin, in which the ammoniated counter-irritants were used with advantage.

77. It is proper that we should now proceed to look to the specific diseases themselves that have been treated by counter-irritation in the manner so often alluded to in this section,—and that we should see what important malady; whether or not tending seriously by its nature to affect life, has been effectually cured by antidynous applications, with little or no assistance from any other species of medical treatment. The list of such diseases, as far as they have fallen under my notice in the course of nine years, may, for the sake of order and distinctness, be arranged as follows:—

A.—PRINCIPALLY AFFECTING THE NERVOUS SYSTEM.

- | | | |
|----------------------------|---------------|--------------------------|
| 1. Acute Neuralgia, | { Periodical, | { <i>Tic douloureux.</i> |
| | { Permanent, | |
| 2. Spasms, | { including | { Epilepsy. |
| 3. Convulsions, | | { St. Vitus's Dance. |
| | | { Hysterics. |
| 4. Cramp. | | |
| 5. Brow-ague. | | |
| 6. Tetanus or lock jaw. | | |
| 7. Highly acute toothache. | | |
| 8. Nervous headaches. | | |

B.—PRINCIPALLY AFFECTING THE MUSCLES AND TENDINOUS TISSUES.

9. Rheumatism.
10. Lumbago.
11. Swelled and highly painful articulations.

C.—PRINCIPALLY AFFECTING THE CIRCULATION.

12. Headache from fulness of blood in the head.
13. Congestions and sudden attacks of blood in the head.
14. Sore throat.

- | | | |
|-------------------------|--|-------------------------|
| 15. Early inflammation, | $\left\{ \begin{array}{l} a. \text{ of the trachea and bronchia.} \\ b. \text{ of the lungs and their membranes.} \\ c. \text{ of the heart and pericardium.} \end{array} \right.$ | Tending to consumption. |
|-------------------------|--|-------------------------|

D.—DISEASES OF A MIXED CHARACTER.

- | | |
|-------------------------|---|
| 16. Suppressed gout, | $\left\{ \begin{array}{l} a. \text{ affecting the heart.} \\ b. \text{ affecting the stomach.} \end{array} \right.$ |
| 17. Genuine gout. | |
| 18. Paralytic debility. | |

E.—ACCIDENTAL, MECHANICAL, AND CUTANEOUS DERANGEMENTS.

- 19. Violent sprains.
- 20. Pimples.
- 21. Biles.
- 22. The ringworm.

78. From this list it appears, that in twenty-two distinct complaints, many of them of a serious nature, counter-irritating or ammoniated preparations have been employed. In the sequel we shall see with what success they were so employed; and the detailed histories of the cases hereafter given, will clearly show the great value of those preparations. I do not assert that all the various disorders just enumerated (74;) and their modifications, have yielded to the agency of the preparations in question; nor that the latter agency was the only means resorted to in all cases for the cure of those disorders. On the contrary, a few of them have, on particular occasions, resisted that agency; others have been only momentarily benefited by it; while a few more have required a simultaneous employment of ordinary and internal remedies, to assist in and complete the cure. Among these several exceptions to the general rule of success are to be reckoned, chronic tic douloureux—chronic rheumatism of long standing—epilepsy dependent on organic mischief in the brain or any part of the spinal apparatus—lastly, rheumatic gout, in individuals whose constitution has been completely shaken by that disorder, or any other previous disease; although, even in this case, some good has been obtained from using the ammoniated counter-irritants. The second and fourth of the obstinate disorders just mentioned are of that number which require, in addition to the ammoniated or antidynous applications, an appropriate internal treatment. The other two are only partially relieved, but never cured, by counter-irritating lotions.

SECTION VIII.

OF THE PARTICULAR ADVANTAGES WHICH APPERTAIN TO THE TREATMENT OR PREVENTION OF DISEASE BY COUNTER-IRRITANTS, AND ESPECIALLY BY ANTIDYNOUS APPLICATIONS, WHICH ARE NOT FOUND IN THE ORDINARY METHODS OF CURE.

Advantages of natural and artificial counter-irritation—Example in illustration of the former—Death produced by the suspension of its action—A second example of a natural counter-irritant maintaining the equilibrium of health—A third and still more striking example of the same—A fourth example—Infantile diseases—Royal Infirmary for sick children—Result of experience therein reference to counter-irritation—Recapitulation of the examples and commentary—Advantages peculiar to the strongest of the antidynous counter-irritants—First advantage: its efficacy soon tested—“Time and perseverance” not necessary—A patient saved from immediate death by it, in a case of gout transferred to the heart—This effect contrasted with the slow operation of certain modern remedies—Second advantage: the patient is not long kept in suspense as to the good result of his case—Long attendance of the physician unnecessary. Third advantage: the certainty that the constitution of the patient can never be damaged by the treatment—Difference in that respect between the system of counter-irritation and the Homœopathic treatment.

79. The credit of many of the advantages obtained through the agency of antidynous or counter-irritants in the treatment of certain important diseases is shared by those preparations in common with many other counter irritants; but the peculiar agency of the antidynous lotions affords besides to the person using them, other results of a satisfactory kind, which are in vain sought for in counter-irritants in general.

80. No one can doubt for a moment of the benefit derived from counter-irritants, whether they be the result of natural efforts, or established artificially and permanently, as in the case of a seton and an issue, or applied transitorily, like a flying blister, a mustard poultice, &c., in either maintaining the equilibrium of health or in restoring it when broken. An elderly lady had an open sore in one of her legs, which had continued for many years. She was otherwise in the enjoyment of perfect health; but the sore was an inconvenience, and in an evil hour she submitted to a succession of dressings, which stopped the discharge from it, and ultimately healed the ulcer. In three months from that time she died in great tortures, arising apparently from some serious affection in the abdomen. The family wished to ascertain, if possible, the cause and seat of the disorder, when it was found that almost all the principal clusters of the glands of the mesentery were either in a state of suppuration or incipient inflammation. I have no doubt that in this case the old sore was a natural external counter-irritant, which kept in check the internal mischief, by what is called derivation (6). The fatal effect of obliterating or interfering with such counter-irritants as are vouchsafed to us by nature, was moreover illustrated by the example of Louis XVIII. of France, whose death

followed close upon cicatrisation of most of the old sores in his legs. These examples prove the advantage of a natural counter-irritant.

81. A young lady, the niece of one of the most eminent judges this country could boast of twenty years ago, had an habitual purulent discharge behind the ears, which a surgeon of known popularity in the vicinity of London cured, by the application of an ointment containing corrosive sublimate. A few weeks subsequent to the cure, while traveling on the continent with her relatives, and under my medical charge, after a moderate dancing at a ball, the young lady was taken suddenly ill with an affection of the heart, and died in forty-eight hours. The authorities of the place having insisted on an investigation of the case, an examination was made by Dr. Dorat and myself, when it was discovered that the right ventricle of the heart contained an earthy calculus, resembling in external appearance what has been called a mulberry calculus of the urinary organs. The specimen is still in my possession.—A gentleman has been twice under my care who, during the autumn and spring, is subject to large biles. He is wretchedly low and miserable while the painful stage of the disorder lasts. As suppuration becomes fully established, his spirits and health improve, and at the end of six weeks after going through a crop or two of those furunculi and troublesome eruptions in almost every part of the body (although seldom in two different parts at the same time), he becomes quite a new man, in feeling as well as appearance. On one occasion it became particularly inconvenient to allow nature to follow the usual course during a threatened attack of the biles, and on the first blush of redness, after the application of several leeches to the part, preparations of lead were put on by the patient, and constantly kept on it, with a view to stop all further progress in the furuncular process. In this the patient succeeded: but in return, a state of health followed, which created alarm not only for the safety of the patient's life, but of his intellect also; for the degree of depression and hypochondriasis which ensued and continued for many weeks, was such as to lead one to expect the worst consequences. Here, again, the advantage of an occasional natural counter-irritant is manifest.

82. Another gentleman who, from the age of five-and-twenty, had carried about with him a most obstinate case of psoriasis in the palm and back of his right hand, which, at times, would extend up the wrist and arm, continued to be in perfect health, so long as that eruption was not tampered with. Every attempt, however, was made by various medical men in this and foreign countries, to cure and eradicate so troublesome a disorder; but years elapsed before any permanent impression could be made on it. When consulted by this individual, who at times placed entire confidence in me (except when I assured him that the disease stood in lieu of some internal malady, and ought not to be interfered with lightly,) I gave it as my opinion that all attempts to check the eruption suddenly ought to be abstained from, and might be

fatal. The advice was disregarded. I saw, many years afterwards, the individual in question, with his hand as smooth as if it had never suffered from the former complaint. The result had been brought about by the use of a particular pomatum, which had been recommended empirically, but of the nature of which he was ignorant. He was then labouring under every symptom of unmitigated dyspepsia, accompanied by a dull, heavy, incessant pain in the right side. He died almost unexpectedly a twelvemonth after, aged forty-four years, and on examination, a large tumour, containing purulent matter, was found, placed between the liver and duodenum, and connected with both. I hold this to be a third capital illustration of the advantage of a natural counter-irritant, which it is always dangerous to interfere with.—Of the evil effect on the general health, and hastily drying up the morbid exudations of this same complaint, I have had within the last few weeks another marked example, in the person of an eminent surgeon-dentist in this town. The ebbing and flowing of his health, as connected with the appearance or disappearance of a cutaneous disorder on his hands, was fully admitted by him, when I called his attention more distinctly to the phenomena of his case.

83. Another example, illustrative of the same doctrine, I derive from my own experience, in the treatment of diseases of children. During a period of ten years that I attended as principal medical officer at the Royal Metropolitan Infirmary for Sick Children, of which I had the honour of being the founder in 1820, and which has recently assumed the title of Royal Hospital, I have treated upwards of ten thousand young patients, many of them mere infants. In the course of that practice I observe that whenever a child, having a natural discharge and ulceration behind the ears, or the milky tetter on the forehead and face, or the peculiar impetiginous eruption at the bend of the arms and knees, which is not uncommon between the age of six and eleven years,—was placed under surgical care, for any of those local affections (although in other respects apparently in good health), and the discharge was suddenly checked,—either inflammation of the membranes of the brain, or hydrocephalus followed, which it became no easy task to remedy. On the other hand, children affected with either of the two latter very serious complaints, were often brought under my notice, who suddenly got well on the spontaneous appearance of the before mentioned eruptions, or upon the back of the ears becoming suddenly and extensively sore. These examples are not brought forward as offering any thing new: for there is scarcely an observant person, be he medical or not, who in all probability has not seen many such; but they are quoted with the view of introducing with greater aptitude the consideration of the advantages of using counter-irritants artificially. For, since nature points out to us, in a variety of ways, the benefit to be derived from the existence of spontaneous counter-irritants, it follows, that whenever these have been injudiciously interfered with, or checked,—the establishment of artificial

counter-irritation in lieu of them must lead to the happiest results; results hardly to be expected from the slow course of an ordinary treatment.

84. Accordingly, it may justly be assumed, that in all the cases already mentioned (80, 81, 82, 83), had artificial counter-irritation been resorted to, immediately upon observing the sudden deterioration of the health of the patient consequent on the suppression of the natural counter-irritant, the untoward results which have been mentioned would probably have been prevented, or, at all events, considerably retarded. This is what was actually effected in the case of a gentleman subject to biles (81), and in most of the cases of children affected with complaints of the head, in consequence of the forced suppression of a retro-auricular, or impetiginous discharge (83). In all those instances, the application of instantaneous counter-irritants produced the desired diversion against the common enemy, viz. the original and constitutional disorder, to keep which at bay a natural or an artificial counter-irritant had become necessary.

85. The exhibition of internal medicines in cases such as I have described, would be of little avail. They are too slow in their operation, and more than problematic as to the result. In this respect, the superiority of the external over the internal treatment is quite manifest. That superiority is even more evident in regard to the antidynous applications, the peculiar agency of which on the human body; and their more rapid effects, will be admitted to be some of their best recommendations; when the cases described in the following pages shall have been attentively perused. Those recommendations, indeed, are of such value, that we may consider the external treatment of certain diseases by the ammoniated preparations in question, to be, in more than one point of view, far preferable to any other treatment, whether it consist in the external application of ordinary counter-irritants, or in the internal exhibition of medicine.

86. Looking at the question merely as it concerns the patient, both with regard to his health and with regard to his interest, the plan which I propose, and which I have had so many opportunities of carrying into effect in the course of the last nine years (as will be seen fully illustrated by the medical histories that follow), offers one great advantage in a majority of cases, which no other method affords; and it is thus that its efficacy is soon tested. Accordingly it will be found that in the larger number of the diseases for which I have recommended the counter-irritating treatment by means of antidynous lotions, their value as a curative agent has been proved or disproved almost at once; unlike, in that respect, to some of the recently-published methods of treatment which have for one of their essential conditions to require "time and perseverance" for the cure. On that condition, indeed, the physician generally insists, in order to prevent disappointment, before he can promise a recovery by the ordinary medical treatments.

87. But in respect to the treatment which I recommend, the

contrary is the case. By that treatment it is proposed to combat any of the maladies specified in the last section, through the agency of particular external applications which are to produce an *immediate* sensible effect, and that of a salutary, relieving, and generally curative character. The patient, therefore, can judge of the value of what is done for him as well as his medical attendant. Take we for example a case of suddenly retroceded gout, in which the most formidable symptoms have arisen, connected with a disturbed and almost suspended action of the heart, and in which, an antidy-nous lotion being laid at once over the pale and flaccid seat of the departed gout, the former redness, swelling, throbbing, and painful condition of the part are as suddenly recalled, whereby the heart becomes quickly relieved, and the patient is snatched from death. Who can deny that in such a case as this the treatment has afforded to the patient the singular advantage for which I contended, in behalf of the particular counter-irritant employed? Would the rubbing in of the veratrine or delphinia ointment over the part have produced so instantaneous a release from so formidable an attack? Yet such an instance, nay more than one, as the result of the application of antidynous lotions, will be found among the cases to be hereafter detailed.

88. Another great advantage of this method of cure, consists in the speedy manner in which the likelihood of its proving successful is demonstrated to the patient; so that he is never kept long in suspense as to the result, nor is the physician called upon for a long attendance on the patient whom he subjects to this mode of treatment. With the exception of cases of chronic rheumatism, tracheaïtis bronchitis, or incipient consumption, or inflammation of a long duration, either local or general,—in all of which I have had to continue my attendance on the patient for a proportionate length of time,—all the rest of the complaints which came under my notice, and which I considered as susceptible of being treated by counter-irritation (and I may assert with perfect truth, that few medical men of the present day have had more extended experience than I have had within the last nine years on that subject)—all those complaints, I say, were relieved immediately, and most of them cured, by one, two, or three applications only of a counter-irritating lotion, the majority of them permanently, and the rest for a longer or shorter period of time. The very first case which will be found at the head of the list, is a striking illustration of the power of the application in question, in at once suspending, under the most trying and unfavourable circumstances, for a period of forty-two days, paroxysms of acute pain which, for *twenty-two* years before, had never failed to attack the devoted sufferer, at some period or other of each succeeding day of his life. Now the contrast between such a mode of dealing with any important disorder by means of the counter-irritants like those I propose, and that pursued by other practitioners who have likewise from time to time recommended particular agents in order to produce a species

of counter-irritation, is very striking. In the method I bring forward, there is no rubbing, day after day, to effect a certain purpose—as is the case with the veratria and other ointments: but the purpose required is obtained presently, and simply by once laying the counter-irritating agent on the part selected for that object.

89. A third, and no mean advantage of the same method of cure is the certainty that, should we be disappointed in our expectation of obtaining by it an instantaneous recovery, or one within a reasonable period of time, we at least incur no risk of damaging the constitution of the patient, as is unfortunately too often the case with regard to the ordinary poly-pharmacous treatment of diseases of the present day, even when judiciously and properly directed by the most skilful physicians. This is still more manifestly the case when the disorder to be removed is of a chronic kind, and requires a protracted use of remedial agents, internal or external, according to the species of treatment preferred for that purpose. No one can doubt, for example, that in the case of an obstinate affection of the liver, in which for a series of weeks the lengthened use of “the blue pill” has been deemed necessary for its ultimate and successful removal,—a certain degree of constitutional derangement is often found to remain behind, for the cure of which some subsequent treatment is required. Now the contrary is the case where disease requires even a *protracted* application of the ammoniated counter-irritants; for there is no example in which such an application has been followed by any derangement. I might, indeed, contrast the latter mode of treatment with that system of predicated infinitesimal doses of powerful medicines, which must be a thousand times repeated before they can cure any complaint. Yet many of those complaints the external counter-irritants have either cured at once or within a short period of time, without any indirect ill effect on the constitutional power of the patient; whereas it is notorious, as regards the system alluded to, that many patients who had lost the complaint for which they had had recourse to homœopathism, found themselves with a more deteriorated constitution at the end of their protracted treatment. We may, therefore, in recapitulating what has been stated in the preceding paragraphs (85, 86, 87, 88, 89) frankly assert that the external treatment of the diseases specified in this volume by the class of counter-irritants I propose, is, in more respects than one, to be greatly preferred by the patient to any other.

SECTION IX.

OF THE GENERAL AS WELL AS ESPECIAL RULES WHICH SHOULD GOVERN THE APPLICATION OF THE ANTIDYNOUS OR AMMONIATED PREPARATIONS, EITHER AS SPECIFIC OR AS ORDINARY COUNTER-IRRITANTS.

Choice of a place for the application—Direct, and indirect or sympathetic impression—Choice of time—Duration of the application—Manner of using an antidynous lotion—Its simplicity and promptitude—Instrumental contrivances in aid of it—Precautions—First sensation produced by the lotion—Subsequent effects—The author's own personal experience—Immediate relief from pain, by means of the lotion—Transition from rubefaction to vesication, and from the latter to cauterisation of the skin—Mode of obtaining an instantaneous blister by the lotion—Other modes related—Superiority of the former—Its great advantages in practice—Manner of treating the blistered surface—Conclusion.

90. It cannot fail to strike every person the least conversant with the action of medicines, that a remedy of such energetic power as the ammoniated compound lotion, and other ammoniated preparations, which I recommend for the external treatment of disease, ought to be used not only with judgment, but also under certain restrictions, cautions, and regulations. These then I shall proceed to detail in the present section. They may be referred, first, to the choice of the place to be acted upon; secondly, to the selection of the direct or indirect sympathetic order of impressions to be produced; thirdly, to the choice of time; fourthly, to the length of duration of the application. Again, we shall have to consider, first, the mode of applying the strongest of the ammoniated lotions, with the various contrivances used for that purpose; secondly, the after treatment of the local effects produced by that lotion; and thirdly and lastly, the peculiar and characteristic sensations excited by the remedy in question. All these points I shall proceed briefly to explain.

91. And, first, as to the choice to be made of the place on which the counter-irritants in question should be applied. We know from experience that if we are desirous to allay, by counter-irritation, the pain and inflammation under which some particular internal organs may be labouring, it is not sufficient to lay the counter-irritant on any part of the surface of the body indiscriminately, but that some one especial part, rather than any other, should be selected for that purpose. This assertion may be at once illustrated by reverting to the case of retroceded gout treated by counter-irritation (87). In that case no practitioner would have dreamed of applying the counter-irritant on any other part than the one which I applied it. This choice of place cannot be determined from theoretical principles, but must depend on our own intimate knowledge of the relation that exists between certain inward organs, and certain portions of the skin. Indeed, on that knowledge rests,

in a great measure, the probable or improbable good result of the counter-irritation we wish to establish; and it were desirable that, instead of the mere empirical acquaintance we possess on this question we were more deeply, versed in the mysteries by which it is surrounded. At present we are not so fortunate, and we must therefore be satisfied with the guide of mere experience and observation.

92. That guide tells us, that independently of a certain direct connection between the organ to be cured, and that part of the skin which is to be the seat of a counter-irritant in order to produce that cure, there appears to be another and indirect connection, which has been attributed to a mysterious "something" called *sympathy*. This "something," at times, plays so important a part in the phenomena of counter-irritation, that we cannot well excite, appreciate, or avail ourselves of the latter, unless we have attentively studied the visible and irrefragable manifestations which are supposed to be the offspring of sympathy. If I apply a few atoms of Spanish snuff to the very lowest edge of the mucous lining of the nose, or pituitary membrane, I instantly experience, at the highest point of that organ, a peculiar irritation, followed by a sudden effort to get rid of the irritating agent,—constituting the act of sneezing, which is accompanied by a watery defluction from every point of the said membrane investing the lachrymal sac, the palate, the pharynx, and the eustachian tubes, as well as the organ of smell. This connection between the margin of a mucous membrane and any other portion of it, no matter how distant, is known and may be explained on the principle of mere continuity, and identity of texture. But when we apply to the middle of the arms a blister to relieve certain affections of the lungs or their investing membrane,¹ or when, in cases of inflammation of the lining membrane of the abdomen, we succeed in relieving it by means of counter-irritants put on the inside of the thigh or on the calf of the leg,—we witness the salutary effect, but cannot tell the reason of it, except that mere empirical observation has taught us to believe that there exists what has been called a sympathetic relation between the several parts alluded to. By what species of complicated and mysterious process does the counter-irritating impressions made on the sole of the feet by tickling excite laughter,—which, in some sudden morbid seizures of the diaphragm and stomach, has been found so advantageous? We should, therefore, be well informed on the subject of direct as well as indirect connection existing be-

¹ At the very moment of writing these lines I happen to have under my care a young lady labouring with severe bronchial inflammation of the lungs, which has become almost suddenly relieved on the appearance of an abundant crop of pustules around a large blister, placed on the upper part of the left arm. Although several vesicatories had been applied before to the chest itself, in order to relieve it from its state of oppression, their effect had been as nothing compared to what followed this spontaneous eruption on the arm.

tween certain parts of the internal body, and its various internal organs, if we wish to make a correct choice of the place on which we are about to excite counter-irritation for the advantage of the patient. With several of these connections, medical practitioners who have paid particular attention to the physiology of man are well acquainted, and they are fully capable of making a proper application of counter-irritants. It would be out of place to enumerate them in a popular work like the present, which does not pretend to teach to the medical world any new physiological fact or theory, but simply aims at divulging the facts themselves to the general reader.

93. The choice of time, and the length of the duration of the application of any counter-irritant, next claim our attention. In regard to the first point. I have found from experience, that the sooner the application is made, the quicker and surer is the good result obtained. This is especially true of antidynous or ammoniated lotions, which, though, like many other counter-irritants, they may be of use in many cases of disease when applied after the employment of other remedies, they are even more useful if applied before any other remedy; and so useful, indeed, in all such cases, as to preclude the necessity of using any other remedy afterwards. Thus, in the instances of headaches,—which are, perhaps, the most triumphant examples of disease cured instantaneously by antidynous lotions, provided they be purely nervous,—it often happens, that such headaches are complicated with derangement of the stomach, for which the lotions afford hardly any relief. Yet, as I am sure to be able to disarm the pain in the head of much of its acuteness, by silencing at once that portion of it which is dependent on the nerves, I do not wait to apply the counter-irritating lotion until after other remedies have been administered with the view to restore the due action of the stomach; but choose the very first moment, the onset of the disorder as it were, to lay the lotion on the affected part, whereby the pain is greatly relieved. So in all other examples of disease, we should be guided in our choice of time for the application of the counter-irritant, by a minute examination of the case itself.

94. The same remark applies well to the point of determining how long the counter-irritating application should be suffered to remain; except that, in such a question, we have two or three other elements to consider, namely, which of the three successive phenomena of counter-irritation we are desirous of producing—what is the degree of susceptibility of the cutaneous system of the patient—and on what part of that system have we determined to apply the counter-irritant. When these minor problems are solved, the main question can be readily answered. It may, however, be stated in general terms, that the application should seldom last longer than from one to six or eight minutes, and that it has often happened to me to find that less than one minute of time in the application was sufficient for the purpose of producing the desired

alleviation of pain and spasm. But in order to excite the higher degrees of counter-irritation, namely, vesication and cauterisation, as many as ten or twelve minutes are necessary. In some rare instances, however, after having watched the effect produced on the skin by the counter-irritant at the termination of ten minutes, I have deemed it necessary to bind the external application to the part, and leave it on till it was dry; a result which takes place very speedily, owing to the almost ethereal volatility of the lotions.

95. The manner of using the counter-irritant I propose is as simple as its effect is expeditious. We do not require, as in the case of most of the modern pomatums, ointments, cerates, and liniments, charged with euphorbium, pellitory, iodine, veratrine, aconitine, creosote, and delphinia, to rub the part affected with the ammoniated preparation morning and evening, for a length of time, and during several successive days, in order to produce the desired effect. All that we have to do, is, first to impregnate with the colourless and transparent liquid, either a piece of linen folded six or seven times to the size of the part intended to be covered, or a piece of thick and coarse flannel; and secondly, to lay either of these on the spot, pressing with the hand at the same time, very steadily and firmly, the said linen or flannel, over which there should be placed a thick towel, doubled several times, so that not only the evaporation of the lotion may be impeded, but the hand employed in pressing the application to the part may not suffer damage from any evaporation or from contact with the liquid. In some parts of the body more convenient than others, the readiest and most effectual mode of pressing down the application, is by tying over it a towel or thick bandage; but to this mode there is the objection that we cannot, under certain circumstances, inspect the part as quickly and as often as is required, so as to judge, from the effect of the application, when to stop, or how long to persevere in using it.

96. On certain parts of the face, such as the temples, forehead, jaws, or chin, the application in the way described (95), must be made with considerable caution, lest the effluvia of the liquid should affect either the eyes or the nostrils. I generally place over either one or the other a thick covering to protect them, before I apply the lotion on any of the parts in their vicinity. Latterly I have found it more convenient and expeditious, as well as safer in these cases, to use a small wooden handle, terminated at one of its extremities by a screw, on which may be fastened at pleasure a succession of pieces of wood, of various sizes and figures, so arranged as to carry a single or double piece of coarse flannel dipped in the liquid. The end of the instrument so armed is applied to the part of the surface of the body to be acted upon, as one does with a wafer-presser to a letter. Such a contrivance is particularly suited for the temples, the forehead, the throat, the chest, and the nape of the neck; since the carrying-piece of the instrument is so fashioned and curved, that it will fit effectually the parts just enumerated.

97. The operator should place his watch on the table near at hand, and observe the time employed from the first instant of the application being made. At the expiration of the first two minutes, he should raise a portion of the compress, and inspect the skin beneath it, in order that he may regulate and secure the accomplishment of whichever effect of the lotion he has previously determined to produce—I mean rubefaction, vesication or cauterisation. This precaution, necessary in all cases and with all patients, is still more so with some of the latter whose skin is exceedingly fine, or their nerves exceedingly sensitive; and also in the case of parts of the body being acted upon, which are by nature very excitable. In this way we avoid any unnecessary prolongation of the pain produced by the lotion, as well as of its action on the skin, beyond the degree of intensity we wish and require to excite.

98. The sensations produced by the strongest ammoniated lotion during its application are, in the largest number of instances, pretty much the same in all individuals. Some of the patients, however, seem to feel the effect more than others, and can hardly support it for the requisite length of time, though that time consists of but a few minutes. Others, on the contrary, whose natural morbid state of suffering is very great, appear to consider the artificial pain produced by the counter-irritating lotion as a relief, and a few even have hailed that pain as a pleasure. Again, some individuals will experience the peculiar sensation produced by the lotion immediately upon its application; while others are a few minutes before they are sensible of any disturbance; and yet the particular effects on the skin, of rubefaction and vesication, will have been going on at the same time. It is therefore important to desire the patients, at almost every instant, to describe what they feel; and we should not be guided by the greater or lesser outward manifestation of pain exhibited by them, since there are many who would prefer suppressing all such manifestations.

99. The pain alluded to (98) lasts but a short time after the removal of the application, and may even, if necessary, be shortened, by laying over the part thick rags of linen, dipped in warm water. I have not known a single case in which the pain in question has continued longer than two or three minutes after the application of those rags; nor does it usually last much longer after the removal of the compress charged with the lotion, even if no warm water be applied to the part.

100. But the word pain is hardly correct, when employed to express the peculiar sensation which is felt by the patient who submits to the action of the strongest counter-irritating or ammoniated lotion. As I have used that preparation more than once on several parts of my own person, for the successful removal of lumbago, severe sore throat, and inflammation of the heart, I can perhaps, describe the sensation alluded to as well as any of the patients who, by their own descriptions, have since confirmed mine. The first

impression made is that of excessive coldness; presently a pricking or tingling of the part supervenes, in all respects like that which we experience in a limb that has been "asleep," when the blood returns into it. This feeling, which at first occurs only in insulated points of the part acted upon by the lotion, soon becomes more general, until it seems to occupy the whole of the surface; and then a sense of heat in the part is substituted for the first impression of cold,—which heat and tingling increase gradually and simultaneously, until they seem to become one single sensation, approaching in its nature as near as possible to that experienced when we hold the hand close to a blazing coal fire for a minute, or rather resembling the painful feeling of a severe burn produced by scalding oil or melting sealing-wax dropped on the fingers.

101. I have thus described the least as well as the worst, of the sensations occasioned by the counter-irritating or antidynous lotions, in order that patients may not be taken by surprise. I have also stated, that such sensations are exceedingly brief, and may even be cut shorter by a very simple process; and further I have remarked that, in some cases, the sensation has been described as a not unpleasant one. It now remains for me so assert, as a crowning of all this, that so soon as the pain of the lotion is felt, that instant the inward pain, for the removal of which it was applied, is suspended and at last vanishes. Indeed, during a paroxysm of *tic douloureux* of the face, and while the patient is under the most agonising suffering from that complaint, the immediate cessation of that suffering which follows closely upon the application of the lotion, and as soon as the counter-irritating pain is set up, borders on the miraculous.

102. If we watch the successive changes that take place in any part of the body during the application of the ammoniated lotions to it, we observe, as was before stated, a lively crimson blush of the skin in the course of the first two minutes, the cuticle remaining tight. In another instant or two more, however, the cuticle is seen corrugated here and there in exceedingly fine folds of a peculiarly white opacity. These folds occur generally in bundles, which are placed apart from each other, and leave a space between, where the cuticle is still stretched; until, in the course of two or three minutes more, it is seen to rise, sometimes in round dots like small bubbles, at other times in patches of every shape and dimension,—in all of which a pale yellowish thin fluid will be found, on close examination, to have collected. In a very few minutes more these patches and dots unite together or become confluent, and give rise, at last, to a general vesication of the skin in the part, resembling altogether that which is produced by an ordinary blister. By this time the quantity of the counter-irritant with which the compress was charged has, partly through absorption (?), partly through evaporation, become exhausted; and if any greater effect from the counter-irritant employed be wished for, the quantity must be renewed and re-applied to the same part, so as to

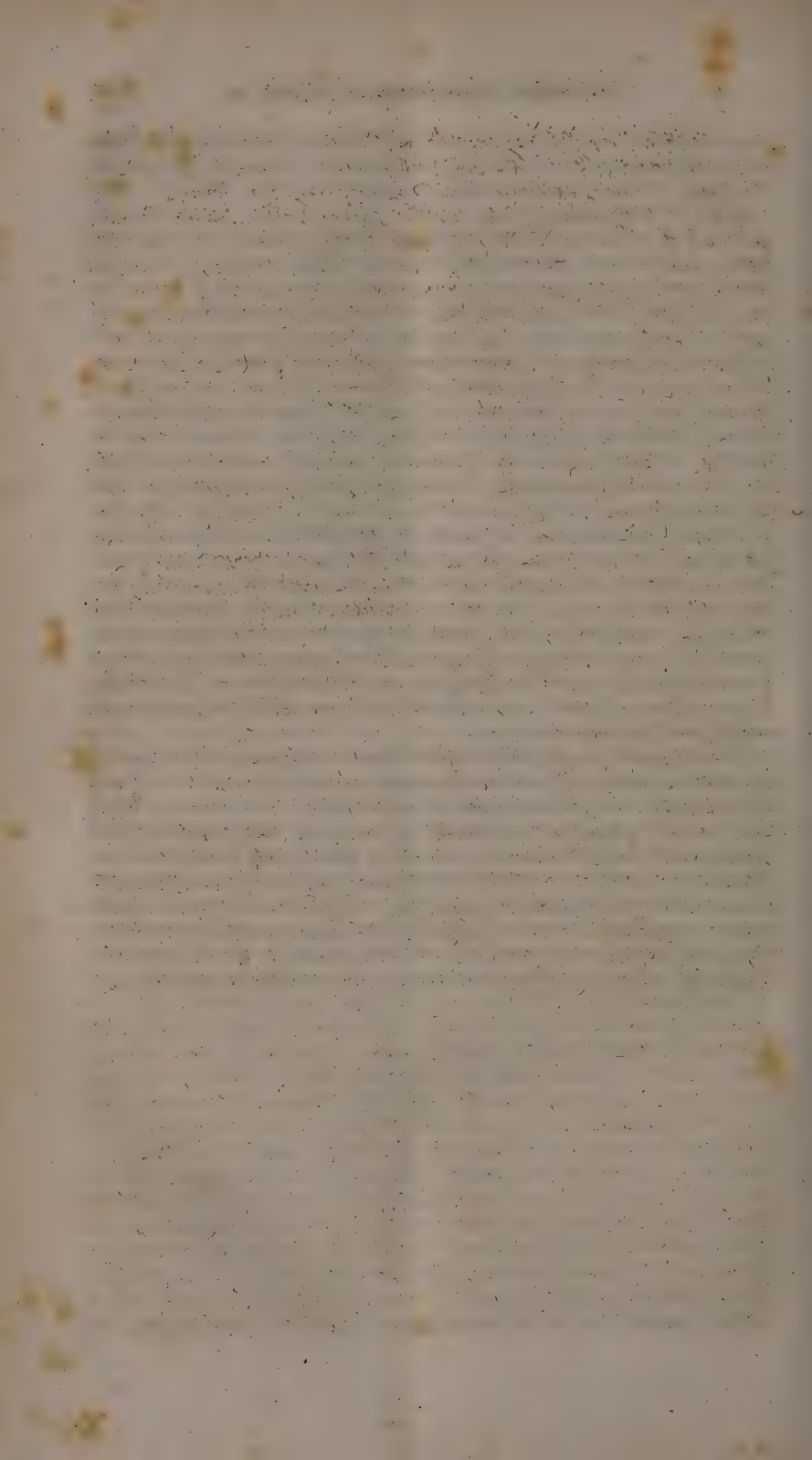
establish in it a downright ulcerative process, in order that we may obtain, as a desirable result, a purulent discharge from the surface. It happens very often, that these three several stages or phenomena of local and artificial counter-irritation, are produced in half the time here mentioned, by the lotions in question; but I have also known, on a few occasions, the third phenomenon, or the stage of cauterisation, not to have been produced under a shorter period of time than two or three hours.

103. From what has just been stated (102), the reader will perceive, that in its progress from rubefaction to ulceration, the lotion becomes a real blistering liquid; nor will they fail to remark also, that whereas a common blistering plaster requires some hours to produce even its first impression of tingling or of something like pain,—the counter-irritating ammoniated, or antidynous lotion, on the contrary, will raise a full blister in less than ten minutes. Experience warrants the assertion, that no other blistering application; hitherto employed in medicine, can produce a more complete, clean, or a better defined vesication than this, in which the fluid secretion from the exhaling apparatus of the true skin is very abundant. In point of quickness of effect, all other blistering applications are inferior to the counter-irritating lotion. I am aware that by means of boiling water, or a piece of metal properly heated, an effect nearly equal in extent and rapidity may be produced; but in those cases the pain is infinitely greater, and I may add much more abiding. Of late years the French have adopted another mode of raising an instantaneous blister, to which I have made allusion in a previous section, while speaking of the moxa,—for to that process it bears a close resemblance. The process, which is as follows, is, as far as I am aware, equally successful with the one I propose, in forming a rapid vesication of the cuticle; but it is, at the same time, so complicated, and attended by such intense pain, that in practice it will not bear comparison with the agency of the preparations I recommend. A piece of linen or paper being cut of the requisite size, it is immersed in spirits of wine or brandy, or even eau de Cologne or arquebusade, or camphorated spirit, whichever of them be readiest at hand. It is then laid on the part to be blistered, taking care that the moisture from the paper or linen does not wet the surrounding surface. The flame of a lighted taper is next applied quickly all over the surface, so as to produce a general ignition, which is exceedingly rapid. At the conclusion of this operation the cuticle is found detached and raised from the true skin underneath it.

104. It now remains that I should state how the part vesicated by the ammoniated lotions should afterwards be treated. And in the outset I may assert that I hold it of much importance, in all cases in which an abiding agency of counter-irritation is desirable, to preserve the skin of the blister produced intact. Fortunately, this object is readily and more easily accomplished by employing an antidynous lotion, than by any ordinary blistering plaster; for it generally happens with the latter, that adherence of the preparation

to the loosened cuticle takes place, and that on the removal of the former, portions of the latter are torn away. Not so in the case of the lotion, which gives rise to no adhesion whatever. When I have succeeded in preserving the bladder of the blister intact, I have observed that the secretion kept increasing within it for the first twenty-four hours; after which time, it began gradually, though slowly, to diminish, becoming somewhat denser and of a more intense colour, until it assumed the hue of mahogany, and the cuticle appeared pergamaneous. In this state I have known a large vesication produced by the lotion over a knee-joint attacked by severe inflammation, to continue without bursting for four or five days; thus keeping up a perpetual counter-irritation on the part through its own inherent properties, by which the local affection was removed. When the cuticle has either burst of itself, or has been broken or cut after complete vesication, I treat it with simple embrocations of warm water, and in some cases lay nothing over the part, except a loose piece of linen, to defend it from external impressions, if it be my intention to stop the further progress of vesication. But if, on the other hand, it is desirable to proceed to the last stage of the agency of counter-irritation, and a purulent discharge be required,—I bind over the denuded surface some clean cotton wadding, which is not removed for three or four days; when ulceration of the surface is generally found underneath. I seldom, if ever, allow of greasy applications to the denuded surface, except under peculiar circumstances.

Having thus brought to a close the series of popular observations on artificial counter-irritation in general, which I deemed necessary to the better comprehension and appreciation of a new mode of producing it proposed by myself; and having fully described the nature and effect of the latter, as well as the way to manage it successfully; I shall proceed to give the narrative of several important cases of the various diseases specified in Section VII., which have been treated by the counter-irritating applications under consideration, and thus demonstrate, by the successful result obtained in almost all those cases, the true value of the remedy in question.



PART SECOND.

NARRATIVE OF SUCH CASES OF DISEASE

AS HAVE BEEN TREATED, EITHER WHOLLY OR IN PART, BY MEANS OF
ANTIDYNOUS OR COUNTER-IRRITATING LOTIONS;

WITH

THE EFFECTS THAT HAVE RESULTED THEREFROM.

Before I advance a single step in the career of historian or narrator of various highly interesting and attractive cases in medical practice, it is fitting that I should premise one or two general observations, respecting the ground of my choice of those which I have recorded in this part of my present publication. It cannot for a moment be supposed that I would claim my reader's attention to the entire collection of the cases which have fallen under my notice in the course of the last nine years (since I first adopted the artificial counter-irritating plan of treating certain classes of disease), and which were treated by me in accordance with that plan. Few of my readers would thank me for such a task; for if the evidence of one or two striking examples of the good effect of the plan in question be brought forward in support of it, and are found amply sufficient for that purpose,—to multiply them, by copying the entire register-book of my practice in this one point, would not only be superfluous, but inconvenient.

A selection of cases, therefore, was deemed necessary; and to that I proceeded under the following impressions:—First, that all such cases ought to be preferred, in which, either through the preliminary statement of the patient, or by a subsequent acknowledgment from himself or his friends, the nature of the disease, as well as the effect of the treatment employed, could be clearly defined. Secondly, that such of the cases to be related should be chosen, as from the peculiarity of their nature, and of the manner of their recovery, would prove the superiority of the individual counter-irritating agents employed and recommended by me, over the ordinary counter-irritants. Thirdly, and lastly, that whenever a case of disease had occurred, which, having been deemed susceptible of cure by counter-irritating lotions, had been treated accordingly, and yet had resisted that powerful remedy, as it had formerly resisted every ordinary treatment,—such a case should be equally chosen for my

narrative, in order to show what might and what might not be expected from the remedies recommended.

This then is what I have done; and I trust that the public will appreciate the motives which led me to the adoption of a system of selection intended to inspire confidence in the reader, while it may prevent the maliciously-inclined from casting the sneer of incredulity on the following statements of facts.

Nor is the last remark out of place on the present occasion; since the results obtained in many of the cases about to be related, have been so unusually striking, that without wishing to tax either the general reader, or the members of my profession, with a proneness to hold cheap medical histories in general, or to suspect their authenticity,—it may be supposed that they would hesitate to believe what is not of an every-day occurrence, unless it were brought forward in the manner I have adopted. To strengthen the line of evidence still further, I shall consider myself at liberty, whenever the usual laws of courtesy and etiquette will allow it, to allude more particularly either to the name of the patient (where permission to that effect has been obtained), or to some circumstantial detail connected with the subject of the case. But neither in this, nor in the selection of such of the details of each case as I deem to be important, shall I depart from the ordinary course of proceeding adopted by medical writers of respectability, in preserving inviolate the confidence reposed in them by their patients.

SECTION I.

CASES IN WHICH THE NERVOUS SYSTEM WAS PRINCIPALLY AFFECTED.

- | | | |
|---------------------|-----------------------------|-----------------|
| 1. ACUTE NEURALGIA. | { Periodical
Permanent } | Tic douloureux. |
|---------------------|-----------------------------|-----------------|

Neuralgia is a comparatively modern name, applied to diseases which affect especially the nerves of the body, and are accompanied with pain. I have superadded the word *acute* to it, in order to particularise, in a more emphatic manner, all such disorders of the class in question as are more intensely painful than the rest: for it is impossible to deny the difference in respect to pain, which exists (for example) between a nervous headache, and the tic douloureux of the nerve situate in the forehead, immediately over the eye. This term of "tic douloureux," which has unfortunately become more familiar to English ears within the last quarter of a century than it had ever been before, is, in reality, no other than an expression common to the French language, and which has since become general in all languages, the meaning of which is the same as that of the more classical name of "neuralgia."

My present object is, not to enter into a professional disquisition on this or any other of the classes of disease embraced by the present and the following sections; but simply to impart as much preliminary information to my general readers, as will enable them to appreciate the importance of the cases about to be submitted to their consideration. I shall therefore only add that, adopting, for simplicity's sake, the word *tic douloureux* to denote all intensely painful affections of one or more nerves of any part of the body (although the expression was originally much more limited),—provided such affections be not accompanied by well-marked fever, or such general derangement as constitutes febrile disorders,—I distinguish among them two well-marked subdivisions. To the first belong all those cases in which the attacks of *tic douloureux* are periodical, whether the returns be at regular or irregular intervals. These, generally speaking, are the most severe cases of the disease. To the second appertain those cases of *tic douloureux* in which the disease, or painful affection, has no well-defined or appreciable interval; and these are the milder forms of the disorder. In both classes of cases, however, it is to be borne in mind, that if the origin of the disorder lie either in a local injury done to the affected nerve, or to some of its branches; or in some organic derangement, such as increase of bone, the growth of a hard tumour, the swelling of an artery or aneurism, and other similar inward causes producing pressure on any part of the nervous system;—then there is no perfect cure to be expected from the application of the antidynous lotion, or from any other counter-irritant, be it ammoniated, or not; or indeed from any external remedy whatever; but only a relief from pain, and that not in any considerable degree.

CASE I.

Periodical and Erratic *Tic douloureux*.

At the head of the cases intended to illustrate the diseases of the present section, must stand that of a patient who will be recollected by many of the leading members of the medical profession in London; as having applied to them all in succession for relief, without obtaining it, and as having at last died in a state of the most intense atrophy, the result of protracted dyspepsia, arising from organic mischief. I was the last medical man he consulted, with the exception of Sir H. Hallford, who, at my suggestion, was called in consultation, on the propriety of allowing the patient to continue the free and increasing use of Battley's Sedative Drops. On that occasion that distinguished physician suggested the addition of very minute doses of tartarised antimony to the opiate; a combination which had the happy effect of somewhat tranquillising the bodily pains of the patient, by means of weaker doses of the sedative. At that time, however, no attempt of a direct kind had been made to stay the attacks of pain, the peculiar nature of which was so striking, that Sir Henry, at the consultation alluded to, was

pleased to prolong his visit beyond the usual period, for the purpose of watching with myself the curious and anomalous workings of the malady.

It was some time after that consultation, when every thing seemed to fail us, that, being accidentally present during one of the most agonising attacks of nerves I had ever witnessed,—attacks of which I had not formed any thing like a correct conception before, notwithstanding the clear and precise manner in which the patient had endeavoured to describe them to me,—the thought struck me that the setting up of an instantaneous source of counter-irritation on the very part which seemed to be the seat of the attack, might, perchance, afford relief. The complaint consisted evidently in a highly painful neuralgic affection of a periodical character; but whether connected or not with the general malady of the stomach and mesentery, which had prevailed for several years simultaneously, no one could tell. The periodicity of the attack was to a degree capricious, and so was the selection of the part on which the disease seemed to vent its rage. Still as all the parts were accessible to the application of an energetic counter-irritant, I proposed and employed one which completely answered our expectation.

Such a case, therefore, forms very properly the first link of the chain of evidence I am about to lay before the public, in support of what I have announced in the title-page, and afterwards developed in the First Part of my present volume. Such, in fact, is the beginning of that extended range of experience in the use of external medicated applications, which I have had now for a period of nine years; and as such, therefore, I place it at the head of my medical narrative.

To add to the interest of the case, I shall introduce it in the words of the patient himself, contained in a letter addressed to me, with a statement of his sufferings; and in a second letter written about four weeks after the success of the first external application, and directed to a very intimate friend of his—a partner in one of the principal banking-houses at the west end of the town. It is proper also to state in this place, that the patient, thankful for the unexpected benefit he had derived from the treatment, had meditated publishing his case in the daily papers, and was only restrained from so doing, by my requesting him to suppress the letter he had prepared on the subject for the editor of one of the leading journals.

“Euston-square, January, 30, 1830.

“My dear Sir,—With all my desire to meet your wish that I should endeavour to put down in writing the peculiar features and character of my case and suffering, as they existed before I (happily I must say) was induced, at the recommendation of our worthy friend Mr. D—, to consult you,—I experience great difficulty in doing it. I cannot, therefore, better relieve myself of the duty than by enclosing you an extract of the statement submitted to the professional gentleman whose advice I last requested, in the faint

hope of benefit; which proving as abortive as all my former applications, had determined me never again to increase my anxieties by any further resort to the faculty. The very great relief, however, which I have already experienced from your treatment, affords me at least the gratifying expectation that I may pass my future days with, if not an entire removal, at least a very considerable release, from the consequence of my apparent constitutional tendency to the affliction I have so imperfectly described.

"You will remember the day you accidentally saw me during the paroxysm of one of my severest visitations, when you acknowledged, that although I had at different times expressed to you how extremely I was often affected, you had until that moment formed an imperfect idea of the extent of my sufferings. Since that period (18th December, 1829) I have diaried the daily result of your attention to my situation, as it was the first time during the greatest proportion of my life passed in the endurance of hourly sufferings, that I have met with such relief as I have now obtained from the means you almost instantaneously suggested. I recall this to your remembrance, because since I saw you, having been asked by a friend, who knows all my former disappointments, on what ground I form my present strong expectation, I have had occasion to refer to my register; from which I collect, that in the forty-four days that have elapsed since the 18th of last month, notwithstanding the unusual severity of the weather (even in this country), and the great vicissitude in the barometer and thermometer, I have passed *seventeen days without any pain whatever*, twenty-six with very mitigated and partial affection, and only one night with any recurrence of the acute distress I was wont to know so constantly. During the whole of this period I have uniformly been able to lessen almost immediately, and shortly after to subdue the pain so much, that I have at times absolutely doubted the reality of my experience.

"I am, &c., very faithfully yours,

"ALEXANDER RILEY.

"*Dr. Granville.*"

The extract referred to in the preceding letter is taken from a full statement of Mr. Riley's case, which that gentleman had submitted to Dr. Armstrong a few months before the death of that eminent physician, and sometime before I was consulted, and is as follows. The words marked by italics are so found in the MS., and the same remark applies to those so marked in the preceding letter.

EXTRACT.

"My peculiar case appears to be one of almost exclusive distress, arising from such constant recurrence of pain in every part of my person, that I know not when or where I am free from suffering. My shoulders, the entire of each side, arms, back, hips, sciatic nerves, all parts of the thighs, knees, legs, ankles, and feet, are

equally visited. I go to bed or rise apparently in my usual proportion of health and spirits, when, suddenly (and as generally in the night as in the day) I am attacked with pain, alternating in throbs, varying in degree of acuteness and in duration from one to twenty-four hours, and more particularly under every and the most trifling changes in the state of the atmosphere. Sometimes I am only affected in one place, but not unfrequently in four, five, and more places at the same time, *and often with such extreme intensity that I cannot well describe my experience*, except that it then appears to resemble the agony of those afflicted with the malady termed *tic douloureux*!

"With more or less of these painful visitations of endless variety, I have passed the last twenty-two years, never knowing one moment beyond another when the morbid action will recur, and to which no caution, or mode of living, or change of residence in town or country, has hitherto rendered me less liable. I have never yet been able to meet with the last effectual remedy for my sufferings, although, since my return to Europe in 1818, I have consulted many of the faculty, and perseveringly resorted to all prescribed means, but without experiencing any benefit whatever.

"A. R."

The second letter from this patient, to which I have alluded in my introductory remarks, was addressed to W. D——, Esq., a very old friend and an almost constant visitor. After entering into some particulars respecting private affairs, the writer proceeds thus, under date of the 16th of January, 1830.

"I fear this sad weather does not agree with you any more than myself, although I thank God to be enabled to say, that under the instrumentality of Dr. Granville (and I must never forget that *to you alone* I am indebted for having first resorted to his valuable services), I have experienced such an immunity from those severe tormentings which have so long and so deeply harassed me, that during, I believe I may say almost during TWENTY-FOUR long years, I have never passed a month so little afflicted with pain (notwithstanding the severity, and to me particularly trying state of the season), as since the 18th of December, on which day he accidentally came into my room during the intensity of one of my violent irritations, of the extremity of which he had, until that moment, formed an imperfect idea. He evidently felt for me, was silent a few minutes, and then, as if by inspiration, suddenly proposed a system from which I appear to have absolutely received almost magical effect:—so much, indeed, has been the change in my favour, that I can at times with difficulty suffer myself to believe it otherwise than a dream.

"Dr. Granville, and I must add, not less kindly, yet attends the variations and progress of my most peculiar case, and at present I entertain the cheering hope of continuing, under the blessings of PROVIDENCE, to enjoy, I dare not say entire, but permanently

most considerable relief from his skilful treatment—a relief which *not in the slightest degree* have I ever been able to obtain from any other of the many of the FACULTY (and those too of the highest eminence) whom I have hitherto consulted in the vain expectation of benefit.

Yours, my dear Sir, most faithfully,

“ALEX. RILEY.”

This patient, who was about fifty years of age when he first consulted me, had served in a public capacity in Van Diemen's Land, where, during an inland excursion, he was speared by a horde of the natives, and left for dead on the spot, with a sergeant and one or two other individuals of the party. He, however, recovered so far as to be able to crawl to the bank of the river, where his boat had been waiting for him, and returned in safety to the colony. The wound inflicted was not deep: it was situated a little above the right hip, rather towards the spine, and healed in a very short time. The attacks he has so forcibly described in his statement to Dr. Armstrong, began soon after, and the reader will have seen that they had lasted for nearly four-and-twenty years without intermission, when he consulted me. Although almost every part of the body was at times affected, especially during the prevalence of any unusually severe weather, and above all immediately previous to any great change in the weather, the spot which had received the wound was always the most painful, and seldom escaped a single day without becoming the seat of considerable agony.

During the paroxysms, experience had taught Mr. Riley that the quickest mode of dispersing the pain was to clothe the part with flannel bandages, and apply them as tight as he could bear. This process diminished the duration of the pain. He had all sorts of contrivances at hand, both by day and by night, for that purpose; and I have been present on more than one occasion previous to my thinking of the external application which afforded him such instantaneous relief, when he would be attacked in several places, one after the other, and as quickly as possible, in the thighs, legs, and arms, all of which he as quickly bandaged, over his garments, giving to the limbs a most curious appearance. How human existence could have endured under such incessant irritation, it is not easy to determine. That it had slowly undermined his constitution, and induced a state of the most complicated symptoms of dyspepsia, followed by an extensive atrophy of the whole body, there is every reason to believe; and this state of morbid action of the stomach in fact was the very one which had led him, from time to time, to consult so many medical practitioners, and which had induced him, in the first instance, to claim my professional services. As to the pains he suffered, he had, as he himself expresses it, acquired such a conviction that art could do him no good, from the repeated failures of the attempts made to cure him, that he never once even asked me, when I first attended him, whether any

thing could be done to shorten his sufferings, beyond what he had himself adopted—namely, pressure, and the moderate use of narcotics.

Mr. Riley continued free from pain until July, 1830, in which month he called on me, whom he had not seen for three months, to inform me that on the 14th a very acute paroxysm of pain, like the attacks of old, had seized the spot where he had been wounded; but that the suffering was immediately relieved by the same external application.

The conclusion of this interesting case was such as might have been predicated. At first, the cessation of the usual daily sufferings permitted the patient to devote more of his attention to his stomach; and by dint of diet and exercise, he so far recovered in that respect as to enjoy, during the rest of that year, and the two years following, a comparatively good state of health; although his emaciated appearance would not have denoted it. During the whole of that period he attended to his daily city occupations, to which he used to proceed either on foot or by a public conveyance; and he had no occasion to consult any medical man, except that he called on me once or twice, to repeat how thankful he was for the very mitigated state of his sufferings, and his improved digestion. He lived by rule, and committed no excesses. Still his emaciation continued until the year 1833, when he had become almost a walking skeleton. At length, early in November of that year, nearly four years from the period of his receiving the first benefit of the counter-irritative plan of treatment, I found him, upon being sent for, sinking under the most complete atrophy I have ever witnessed, attended with aphthous ulcerations of the mouth, and of the whole of the gastric and intestinal canal, as evinced by many infallible symptoms. He soon sank, and expired on the 17th of the same month, in my presence, without even the movement of a muscle. There seems no doubt that had the suspension of the intense nervous suffering, which he had obtained through the external ammoniated counter-irritant, and enjoyed for a period of four years, been afforded him twenty years before, his life might have been spared to a more advanced age.

CASE II.

Permanent Tic douloureux of the Cheek, Ear, and Throat.

Mrs. P——, a young married lady, had been afflicted for upwards of three months, at the period of my seeing her on the 19th of March, 1830, a little way out of town, with constant neuralgic pain of the lower half of the left cheek, at times exceedingly acute, and generally shooting into the ear, or down the muscles of the neck on the same side. The patient was moreover labouring under a manifest disease of the heart, which induced me to inform her, that I feared the system of counter-irritation would not succeed in affording her permanent benefit. She however insisted on trying

the external application, as she felt very desirous to procure some relief from the constant pain she was suffering, and which no internal remedy hitherto employed had in the least diminished. An ammoniated lotion, diluted with one third of its bulk of water, was applied to the left side of the neck, immediately under the jaw, and the application timed by a watch. In five minutes she complained of great heat and cutting in the part. The skin was then quite red. In five minutes more the counter-irritation set up had much increased, but the inward pain had become in proportion more bearable, until it disappeared at last altogether, before the expiration of a quarter of an hour. As the strength of the lotion had been reduced, no blister followed its application.

CASE III.

Permanent Tic douloureux of the Face.

In May, 1832, Mrs. Usherwood, a person residing in Brown-street, Duke-street, Grosvenor-square, applied for advice on account of her mother, who for a considerable length of time had suffered great tortures, from intense pain in the nerves of the upper part of the face, temple, and orbit of the eye of the right side. An ammoniated lotion of moderate strength was applied in the usual manner to the temple, care having been taken to cover the eye with a towel. A blister was raised in six minutes, which relieved the pain as quickly, and healed without any other application than that of rags dipped in warm water. The neuralgic pain never afterwards returned.

CASE IV.

Tic douloureux of the Chin, alternating with general numbness of the part.

The Right Hon. the Countess of ———, whom I had often attended on former occasions during ordinary attacks of disease, requested my advice for a singular affection of the chin, under which she had been labouring for some time. This lady had formerly been, and still was, occasionally subject to very severe headaches of a nervous character, which confined her to a dark room for two or three days. On the 14th of July, 1832, her ladyship informed me that, for many days, her chin, including the under lip, had been attacked at irregular periods, by day as well as by night, with the severest pain in one or two spots,—which was scarcely bearable,—and that, between the intervals, every part of the chin not only felt numbed and insensible, but was actually so, even when pressed or pinched. As the attacks of positive pain were very frequent, an opportunity was soon afforded me of witnessing one of them. The ammoniated lotion,—with the efficacy of which her ladyship was acquainted, from having witnessed the good effect of it on her sister-in-law, whose case will be related further on,—being proposed to her and assented to, was applied on that part of the chin which corresponds with the opening through

which the mandibulo-labralis branch of the fifth nerve comes out from the bone to the muscles and integuments. The result was an instantaneous removal of the pain, and a return of the natural sensibility of the part. The application produced vesication, not in a general mass, but in distinct little dots, where it was curious to observe the epidermis rising up, followed by a minute drop of fluid which filled it; and this took place during the space of some minutes after the lotion had been removed. In about a week the pain seemed disposed to re-appear, a leech applied to the gum prevented its return.

CASE V.

Tic douloureux of the Upper Lip.

Mrs. I.—d, aged 30 years, for many years subject to an occasional tremulous motion of the upper lip, accompanied by acute pain, which generally lasted three or four minutes, applied to me at the morning consultation of the 13th of April, 1835, for advice. She could not assign any reason for the complaint. Her health appeared good, and her medical attendant had long ceased to prescribe for her, as he could not discover any other complaint requiring medical aid, except the *tic* in her lip, which he acknowledged he could not cure. I proposed to apply at once an ammoniated lotion to the trunk of the portio dura of the seventh nerve (explaining to her the meaning of those terms) by the side of the cheek, towards the ear; to which proposal she assented. The lotion was retained on the part for nearly four minutes, and was removed in consequence of the severe burning pain the patient experienced from it. The application of a wet rag stopped this pain in the course of a very short time, when it was found that neither the tremulous motion nor the painful affection of the lip remained. I learned sometime afterwards that the disease had not returned.

CASE VI.

Tic douloureux of the left side of the Head and Face.

A young lady of Southampton, remarkable for her general appearance of perfect health and personal attractions, lately married, was placed under my care nearly ten years ago, while labouring under a chronic disorder of the abdomen, accompanied by excruciating pain, the result of severe inflammation of the peritoneum, that had lasted several months, from which she had ultimately though with difficulty recovered. A few years afterwards she was seized with acute pains in the left temple, extending upwards and downwards, shooting into the eye, and spreading to the back of the head. During the paroxysms I have seen the two eyelids of that side drawn forcibly towards the temple, and brought nearly in contact; the eyebrow at the same time descending, while the skin of the cheek seemed pulled up towards the eye. These

paroxysms would continue several minutes; flashes of light shot through the eye, and the globe of it was exquisitely tender to the touch. The frequency of the attacks, and the length of time they had lasted, when I first saw the patient for the present complaint, had produced a visible diminution of size in the oval of the orbit, and a perpetual morbid tenderness of the scalp. She wished to try the effect of some external application, to stop the pain, and keep it under control; as she had failed in obtaining any relief from internal medicines, and scarcely expected to be cured. On the very first opportunity I applied a compress, with an ammoniated counter-irritating lotion; pressing it steadily on the left temple. In two minutes all contraction had ceased, and the pain was gone. That day it never returned. On the following day, however, it again invaded the part, and again it was suddenly stopped by the same application. No blister was raised on those occasions. In this manner the really painful part of the complaint was mastered and kept in check; and surely such a truce from bodily suffering (never obtained before) was worth obtaining; and deserved the warm acknowledgments of thankfulness it received from the patient. After a continued treatment of some weeks, the young lady had a long interval of cessation of the disorder. It returned in the following year, but was again mastered; and although from time to time ever since (but in successively diminishing degrees), the patient has been made sensible of her former complaint,—her general health, even in that respect, has been so much improved, that she does not look upon herself as in any way requiring medical aid.

CASES OF A MORE REGULAR FORM OF TIC DOULOUREUX OF THE FACE.

I wish now to put on record the failure of the antidynous lotion, and of every other counter-irritant, ammoniated or otherwise, that had been tried before, in affording permanent relief, and accomplishing a perfect recovery, in three instances of genuine and chronic tic douloureux, that fell under my notice.

The one case was that of Mrs. B——, a lady advanced in years, recommended to me by the Rev. Dr. Stoddart, Rector of Brentford, in May, 1835. The second case was that of a young lady, recommended by Mr. Workman, surgeon at Reading; and the third is that of a gentleman, whose medical history, as written down at full length by himself, is full of interest and instruction.

I distinctly point to these three cases, because in each of them I find the correctness of my observation proved,—namely, that wherever the painful affection of the nerves called tic douloureux is the acknowledged or known product of local injury or organic derangement, no permanent relief, no radical cure, can be hoped for from counter-irritation. Relief, sometimes considerable and immediate, may indeed be afforded, and was afforded in each of

the following cases by the ammoniated counter-irritants ; but such a relief is of a purely temporary nature, and requires to be obtained over and over again, by a repetition of the application. I now proceed to detail the cases in question.

CASE VII.

Mrs. B——, residing at Brentford, a lady past the *meridian* of life, had from *that period* of her existence up to the time of consulting me (six years), suffered under the most agonising pain in the right side of her head, which was attributed to constitutional causes. The pain occupied the whole of the parietal region, the temple, and portion of the forehead on the right side;—it descended over the eye down to the cheek; and while the paroxysm prevailed, these parts not only felt but looked puckered up and contracted, so as to exhibit a most pitiful spectacle to the beholder. Such attacks as these would come on many times during the day, and the nights were often passed with equal suffering, and were generally sleepless. From the statement of her husband, who accompanied the patient to my house, and from the subsequent corroboration of it given me by her daughter, this miserable victim of the most aggravated form of *tic douloureux* had derived no benefit or alleviation whatever, not even temporary, from the various treatments and remedies to which she had been subjected. Her general health had at times given signs of being seriously affected by the complaint, and the emaciation was considerable, although her person was of large dimensions. On one occasion only was Mrs. B—— relieved, and remained for more than a fortnight afterwards quite free from pain. Being in her chamber one night, bearing with resignation her never-ending tortures, and confined by an unusual degree of debility, she saw through a window the glare of flames, rising from a portion of her own house towards the back of the building, and at the same time the cries of fire and alarm reached her ears. Impelled by the natural love of life, and the desire to escape danger, she found strength enough to hurry from her bedchamber, half clad, down the stairs into the open air, and thus made her escape to a neighbour's house. From the first instant of the alarm, the nervous pain in the head and face ceased, nor did it return for a period of two weeks. The patient's friends seemed inclined to ascribe the return of the complaint to some imprudence on her part. Be that as it may, the sufferings soon became as severe as ever, and the hope of relief as desperate. In this state I first saw her (6th May, 1835); and during my first visit I witnessed one of the attacks which I have endeavoured to describe. This was a case which at once bespoke the little chance of cure it afforded, and I signified the same to the parties, offering, however, to adopt the plan of counter-irritation, as a means of giving momentary relief. The offer being accepted, the patient removed to town for a few days, during which I applied the coun-

ter-irritating lotion several times, and always with the same result, namely, the arresting of the pain in a few minutes, and prolonging the interval between the paroxysms. At the termination of the period for remaining in London, the patient returned to her home; where she continued for a longer period the use of the counter-irritant, with the same momentary beneficial result; but without effecting a cure, as was indeed apprehended from the commencement of the treatment.

CASE VIII.

The second example of partial relief only from acute nervous pain, obtained by means of counter-irritation, is that of Miss A. H——, aged about twenty-two years, respecting whom I received a letter of consultation in April, 1837. This lady had been seized some time before, on going to bed, with pain in the right side of the face, which continued to attack her every night about eleven o'clock, following generally the direction of the *pes anserinus*.¹ The pain darted from the ear, across the cheek, to the upper and lower jaw, to the roof of the mouth, and down the neck. When the attack was very severe, she experienced a tenderness over the scalp on the same side. Sometimes the pain would centre in the ear. It generally went off in an hour or two, and she used to feel very little of it during the day. Her general health was very good. The mother's subsequent statement of the case differed so far from the preceding one, that she described paroxysms of pain during the day, and mentioned as the origin of the complaint, a nervous illness which her daughter had had two years before, and which had left very considerable debility of the nerves of the head and back. She suffered also very often from nervous headache, and enjoyed tolerable health only when kept perfectly quiet.

In this instance I deemed it necessary to prescribe a little preliminary medicine, after which I recommended the application of a counter-irritating lotion. Of the result of the latter I was informed on the 19th of April, by the mother, in the following words:—"The pain of the tic was not violent but teasing, and had been so during four hours. The lotion produced the effect described by Doctor Granville, in stopping the pain of the tic *immediately*; but a short time after removing the compress, the pain returned more violently, and continued for ten or twelve minutes, after which she was free the remainder of the day, and at night she slept well. On the following day the tic was slight from 8 A. M. till 12, when the pain rather increased, and the lotion was again applied with similar results." In reply to this first report, taking into consideration the additional information afforded me by the mother, and the previous nervous affection of the head, I was induced to recommend the

¹ The *duck's web-foot*, a peculiar ramification of nerves in the side of the face.

close examination of the back teeth of both jaws on that side of the face, and if none were decayed so as to account for the tic, then to apply the counter-irritating lotion on the spine, and on different parts of it, from the loins upwards to the nape of the neck, day by day, an hour before the expected paroxysm. This system I had known to have proved completely successful, in two other nearly analogous cases of nervous pain. Whether it was followed up in this instance or not, I cannot tell, as I never received any further information on the subject; and this is pretty generally the case when a country patient consults a metropolitan physician by letter. The treatment recommended by them is either irregularly or imperfectly followed up, and a perseverance in it not being insisted upon by those present, no proper result can be expected. I feel a moral conviction that, had my plan of acting on the nervous column of the spine, from its lower extremity upwards, by counter-irritating agents, been carried into effect with precision and regularity, the patient would have recovered.

CASE IX.

The last example of tic douloureux in which counter-irritation afforded only momentary and very partial relief, was one which in my opinion originated in an injury done to the superorbital nerve of the right eye, by the repeated introduction of needles into the eyebrow, with a view to restore, or rather to invigorate, the sight of the right eye; agreeably to the views of a fashionable and popular oculist in Paris. The character of the disease is forcibly described by the patient, a gentleman well known in the higher circles, from his personal merits and connections. In October, 1837, he thus addressed me from Lincolnshire:—"I have been a sufferer for six years from tic douloureux. During the first three years I had intervals of freedom from pain of three or four months; but in the last three years I may say I have scarcely been a day totally free from it. Some days, indeed, it has been scarcely perceptible; but at others, and for days and weeks together, I have suffered the most violent spasms on the right side of my face, with cutting and burning pains, like flashes of lightning, through the face, from my temple through the right eye, under it, and downwards by the side of the nose to the upper lip, the upper gums and teeth, and occasionally in the lower jaw, teeth, and tongue. From each and all of these I have now been suffering most acutely for upwards of a week, night and day, setting sleep at defiance, and disabling me from eating or even speaking without torture. Between the spasms I am totally free from pain; but, alas! those intervals are very short: from two to ten minutes and no more. My age is thirty-four, and in every other respect I am as strong and healthy as any man need wish to be. I live most temperately, and never commit excesses. The first attack of tic I ever had, succeeded a long and severe rheumatic fever, which had confined

me to my bed for six weeks. The first symptom of the *tic* was a slight pricking in one of my teeth, which, on the pain increasing, I had taken out; a fate shared afterwards by another, though uselessly. Most medical men whom I have consulted, both in England and Germany, have called it *gout*; and latterly I have been trying to bring on a fit of that disease in my feet, by using strong mustard-baths, of which I have taken fifty-three without producing the desired effect. Medicine in abundance I have taken, including carbonate of iron and quinine; and externally I have used belladonna, veratria, acetate of morphia, and other ointments without end, and without success," &c. &c.—I hope to be excused if I quote part of my reply to the preceding letter, as it may and will explain some of the cases already described, and others to be related hereafter, in a clear and familiar manner, and also because the ultimate result of my treatment was such as I had led the patient to expect. And I may add that I am thus minute in recording the present, as well as the two preceding cases, of comparative failure in the treatment of disease by counter-irritation, from a desire to state the whole truth; as truth, whether favourable or not to our preconceived conclusions, is always instructive. The part of the reply in question ran as follows:—"Of all the various forms under which neuralgic affections of a local character, accompanied by acute suffering, present themselves to our attention, that which you have described so minutely from the unfortunate experience you have had in your own case, is the most frequent; and I scarcely exaggerate when I state that of all the purely nervous complaints I have treated for the last twenty years, the facial *tic* has occurred at least once in every six or seven cases in my practice. You are probably aware,—for long suffering makes people inquisitive as to the seat of their ailments,—that the seat of the pain you suffer is that exquisite network of nerves, called (because it resembles it) the duck's webbed foot (*pes anserinus* of Case VIII.), the various filaments of which supply sensitiveness to the temples, the eyelids, the side of the nose, the lips, particularly the upper lip, the gums, teeth, &c. These, by a direct communication with the branches of another nerve, equally with themselves deriving origin from the brain, hold intimate communion with that centre of animal life and feeling which bears the name of the great sympathetic, whereby they become connected with almost all the animal functions of the body, particularly those of the heart, liver, stomach and intestines. This simple outline at once shows how the painful affection of one part of this arrangement may propagate itself to any or every other part, and leaves the only other question in this matter doubtful, namely, at which part, or on which point of the arrangement, does the painful affection begin, and what produces it. Clear as your description is, it does not enable me distinctly to make that point out. I have to state, that in all cases of *tic* such as yours, when they are recent, I have found immediate recovery to follow the use of proper counter-

irritating external applications, which I have used with success since 1829. But when the case has been suffered to run on for a period of *six* years unmitigated, then I do not expect from counter-irritants more than a mere alleviation from pain," &c. &c.—In order to bring this interesting case to a conclusion, I shall briefly state that the patient came to town; that I discovered on examination of the affected part, and close enquiry, that the origin of the disease was to be ascribed to a positive local injury done to some filament of the superorbital nerve; that I told the patient so, declaring at the same time that nothing but the destruction of the sensibility of that nerve afforded the hope of a cure, which it would be in vain to expect from *any* general treatment; and lastly, that I repeated to him the previous observation I had made in my letter, of a mere temporary though immediate relief from pain being likely to result from an ammoniated counter-irritating application. That application, however, having been resorted to the moment the paroxysm came on, the pain was instantaneously stopped. At each repetition of the attack, and of the application, the same result followed. But as the attacks were very frequent, and the counter-irritant produced at last a blistering of the skin owing to its repeated applications; while on the other hand I had candidly declared that nothing but a very prolonged use of that counter-irritant afforded a chance of recovery; the patient got naturally discouraged in three or four days; again consulted his ordinary apothecary for some internal remedy, which, like all the previous ones, proved nugatory; and at last he proceeded to consult an eminent and popular practitioner at Leamington,—who, I will venture to predict, notwithstanding the high opinion I entertain of his skill, will not cure the case in question.¹

2. INTERMITTENT HEMICRANIA, OR BROW AGUE.

I shall borrow from the lectures of a very industrious as well as ingenious physiologist and brother practitioner, Dr. Marshall Hall, a brief summary of this disease:—"The ague pain, called the brow ague, occupies the brow, the temple, the forehead, the back of the head, &c.; it occurs in paroxysms, frequently of considerable regularity. It is often excruciating, occasionally inducing delirium, and still more frequently redness in the conjunctiva. It may recur once or twice in the day; is apt to return in the spring and autumn, from exposure to the northeast wind; prevails in damp or marshy districts, and is frequently observed to accompany the epidemic influenza. This pain is almost certainly removed by quinine or arsenic." In all this, with the exception of the concluding sentiment, I fully coincide. Quinine or arsenic, which cures intermittent fever, too often fails to cure the nervous pain of

¹ I have since met the patient accidentally in the street, and regretted to observe that he was suffering still under his dreadful malady.

the brow by which it is accompanied. When that especial affection of the nerve is not clearly connected with the marshy intermittent fever, neither quinine nor arsenic will make an impression on it; as will be seen in the two following distinct cases among many others.

CASE X.

Brow ague of the superorbit of the right Eye.

Count de ———, secretary to one of the foreign missions in London, and since promoted to the rank of minister plenipotentiary, had been suffering for several weeks under daily and severe visitations of superorbital neuralgic pain, which invariably came on at eight o'clock in the morning, and generally lasted till noon. In hopes of being released from so troublesome a complaint, the count had had recourse to almost every species of treatment that had been recommended to him, and in default of all benefit derived from the suggestions of the regular London practitioners, he had applied to a well-known surgeon at Bromley, who had treated him with large doses of bark, but without success. Again disappointed in his expectations, the patient at last betook himself to the consulting-room of the late Mr. St. John Long, which he assiduously frequented, without, however, obtaining the smallest particle of benefit from that individual's peculiar mode of treatment. About this time the count heard of one or two cases of tic and spasmodic nervous pains which I had cured, by means of the ammoniated counter-irritating lotion, and he was in consequence induced to request my advice upon his case, respecting which he supplied me with all the preceding particulars. On Tuesday, the 20th of July, 1830, I attended him at his lodgings in South Audley street, before eight, A. M., the hour of the expected attack of brow tic. I had not long to wait before it afforded me an opportunity of witnessing its sudden inroad, and the frightful contractions as well as quiverings it produced, in the parts affected. A compress with the lotion was instantly applied to the brow, and kept hard pressed in its place for five minutes (care having been taken previously to protect the eye). The spasmodic contractions were almost immediately suspended, and soon relaxed. At the expiration of two minutes the pain was completely gone, and at the end of three minutes more a prominent blister was raised, which discharged a great quantity of serum,—scalding the part as it trickled down the side of the face. The blistered surface healed, in three days, without any trouble, and the complaint never afterwards re-appeared.

CASE XI.

Brow ague of the orbit of the left Eye.

Lady Caroline ———, a young and unmarried daughter of the Earl of ———, was, during the unavoidable absence of her regular

medical adviser, an eminent physician, who was then attending the sick bed of his own wife, placed under my care in April, 1836. She was apparently labouring under some accidental catarrhal complaint, of an acute character, accompanied by severe cough, soreness of the throat, and fever. In addition to this indisposition another had supervened, in the shape of an acute pain, which was almost permanent, extending from one end of the left eyebrow to the other, contracting it, and occasionally shooting into the eye and down the left side of the nose. The remedies she was taking, and which appeared most judiciously prescribed, had relieved her symptoms of the pectoral disease, but had done nothing towards diminishing the superorbital pain, which was at times said to be intolerable. Finding no reason to alter the medicines she was taking for the general complaint, I simply confined my advice to the use of a counter-irritating lotion, placed on the forehead or the temple, for the neuralgic pain. The application was made by myself, as I seldom trust the first operation of the remedy to the patient himself or his attendants. Before I left the house the pain was gone. I saw her ladyship two days after, and she had had no positive return of the pain, although at times she had been threatened with it. But the use of the same external application diluted with water, had prevented the full development of the pain. Whether it ever came back again I have no means of ascertaining, as the patient soon after returned under the care of her own regular medical attendant, for a continuance of the treatment of her more general indisposition.

3.—OBSCURE NERVOUS PAINS.

We assume that the organs of sensibility are the seat of pain. Wherever, therefore, the latter is present, no matter in what part of the body, it is usual to conclude that a nerve is somehow or other affected. In general, such affections are so well marked, and so characterised, that (as we have already seen and shall again see, in the present work) we can distinguish them by particular names significative of their origin, their cause, their individual situation, or all of these together. But there are pains (still of the nervous kind) which do not lend themselves to any known classification, and to which, therefore, it is next to impossible to assign any particular denomination. They are in fact obscure in every way; obscure in their situation; obscure in the individual nerve they may reside in; obscure in their origin; still more obscure in their connection with other organs, and in their influence on the general or particular functions of the body. Almost every practitioner has met with such nondescript pains in the course of his experience, if it has been large; and the best writers on the nervous system and its disorders, Bell, Swan, Louis, Ollivier, and others, have not only noticed them, but decided on considering them as "obscure nervous pains." I cannot follow better guides than those eminent men, in

adopting such a denomination; especially as I fully coincide in their views on the subject.

CASE XII.

Obscure pains in the muscles of the back of the neck, suddenly shifting to the side and front of the abdomen.

Mrs. De La C——e, while nursing her seventh child two months after her confinement, was suddenly seised, on the night of the 13th of May, 1830, with a most excruciating pain in the nape of the neck, which seemed to draw the head backwards, and retain it in that position. The suffering was so acute that it brought large drops of cold perspiration on the forehead. The child was removed from the breast and the pain appeared to subside, but it again became exasperated on the child's resuming its former position, and lasted the whole night. Being sent for very early the next morning, and finding, upon examination, no reason whatever for suspecting any sudden and serious disorder of the head, the pulse being moreover calm and good, I felt disposed to consider this painful affection as one purely nervous. I forthwith applied to the seat of pain an ammoniated counter-irritating lotion, which the patient had always in readiness in the house, as she had found it particularly useful in stopping ordinary nervous headaches, to which she was subject. The first application cured the pain in three minutes, and left the part entirely free from suffering. On the succeeding night, however, an attack of pain, as severe and intense as the one of the preceding day, came on in the back, also in the left side of the abdomen, and partly in front of the latter. Again I was summoned to determine as to the propriety of using the lotion once more, in doing which I was nothing loth, being now fully aware of the character of the complaint. On this occasion I found the pulse to be full and quick. The heat and pain which followed the application of the lotion occurred in less than one minute, while the external pain as instantaneously passed away; the pulse coming down at the same time to nearly its natural standard. There was a large blister formed on the side in about three quarters of an hour, and the painful affection never after returned.

CASE XIII.

Acute pain, assuming the character of inflammation in the instep, mistaken for gout.

On the 26th of June, 1832, being in attendance on the young son of Lord F—— L—— G——, his lordship, after the visit, requested my attention and advice respecting a singular affection of the instep, under which he was then labouring, and from which he had, on three former occasions, suffered to a very great extent, and for several days. The complaint, at the first onset, had been treated as gout; then as a mere local inflammatory affection of the part;

again, as a sympathetic disorder dependent on the stomach; and lastly, once more as gout,—that being the more general impression. The treatment had varied as much as the opinions had; and it was only after a very long season of excruciating sufferings, followed by many weeks of crutch-exercise, that his lordship had recovered the use of his feet. On the present occasion, the disorder had only just began its inroad on the same part, but it already threatened to be fully as painful, and was as much inclined to inflammatory action, as before. The patient could scarcely stand upright without pain, and walked as a lame man walks. With the pain, there was a sensation of stiffness also, produced, I presume, by the swelling of the part; and the surface was partially red. The general health was evidently not good; but whether that arose from the great bodily suffering, or from the several remedies, principally mercurial, which the patient had been taking, I had no time to enquire. The circumstance itself, however, induced me to prescribe such internal remedies as I deemed calculated to restore health; while at the same time I prevailed on the patient to allow me to apply a thick compress over the affected part, with an ammoniated counter-irritating lotion. In a few minutes the pain subsided, but did not completely disappear; in consequence of which I recommended that the instep should be bandaged tight with the compress upon it, and that the latter should be maintained in its place till after his lordship's arrival at O——, whither he was proceeding with his family that same afternoon. A doubt existed in my mind as to the complaint being genuine gout, and I felt rather inclined to view it as one of those obscure and anomalous nervous pains, which may occur at times in almost any part of the body. Hence my recommendation of the instantaneous counter-irritant. For some days I was kept in ignorance of the effect of that recommendation; but on the 6th of July I received from O—— a letter, of which the following is a copy.

“Sir,—I had fully intended to make you acquainted with the result of your treatment of my complaint in the instep, but had put off doing so till your last communication with Lady F—— reminded me of the omission. The treatment was completely successful. It is at least certain that the sensations of pain, stiffness, &c., gave me reason to expect as long and severe an infliction of the malady as any of the three former attacks, and that within twenty-four hours (*instead of ten days*) of the local application recommended by you being used, with the internal medicines, the disorder departed. I found by the time I arrived at O——, that the lotion had raised several small blisters. The next day the pain appeared to have shifted a little lower down, when I applied the lotion to the place without producing a blister, and within two or three days I had nothing left but the weakness incident to the former swelling, and which is now quite removed, or at least imperceptible on any ordinary use or motion of the joint.

"I cannot hesitate to ascribe the comparative quickness of my recovery to the use of the local application, as, although the advance of the disorder had been less rapid than on former occasions, and the seat of it less extended, the pain for a time had been quite as acute and indicative of severe and increasing inflammation; and the usual and necessary means of calomel, abstinence, &c., had been resorted to, as on former occasions, without any immediate effect.

"I imagine that the success of this treatment is conclusive against the case being one of ordinary gout.

"I remain your humble servant,

"*Dr. Granville.*"

"F — L — G —."

CASE XIV.

Gnawing, and almost permanent pain at the pit of the stomach, occasionally much aggravated.

A gentleman residing in Queen Anne street, who has been all his life subject to irregular or disturbed digestion, and who in former years had suffered under ordinary attacks of gout, in one of which I had attended him professionally,—has experienced for the last five years an almost incessant pain at the pit of the stomach, near to that part which corresponds to the origin of the duodenum or first intestine. Sometimes the pain is increased by pressure, at other times not. When very acute it has once or twice occasioned nausea, and even actual sickness or vomiting. Palpitations of the heart seem pretty constant attendants on the pain, and the disturbance of the nervous system is simultaneous with that of the circulation. Still there is no reason for believing the heart or any part of its structure to be positively affected, as no such disorder can be detected by the stethoscope. This pain is generally of that acute character which plainly denotes its seat and origin; and although I will not deny that an obstinate dyspeptic condition of the stomach may be greatly concerned in the production of such a pain, I can have no hesitation in considering it as principally nervous. Every means, internal as well as external, having been resorted to without success, I recommended about three years ago a strong ammoniated counter-irritant to be used, which produced the happiest result. The pain has however returned from time to time since; but the patient is so well acquainted with the degree of relief he can always command, by laying a compress saturated with the same counter-irritating embrocation on the part, that whenever it becomes necessary, he as invariably has recourse to that embrocation, and always with more or less success.

CASE XV.

Acute and spasmodic pain of some of the nerves of the left thigh.

Reading over my diary for July 1833, I find that on the morning of the 3d of that month I was suddenly seized, without any

previous and obvious cause, with an acute spasmodic pain along the great muscles of the left thigh, about midway and in front, which pain increased to such a degree towards night, that I could scarcely walk home from the last house to which I had paid a professional visit, distant only a few hundred yards. The first coming on of the pain was accompanied by twitchings and distinct *subsulti* (jumpings) in the muscles. These, however, subsided as the pain became more and more fixed, until they disappeared, leaving the part in a state of great suffering. Pressure with the fingers on the part did not increase the pain; the surface offered no indication of redness or of inflammation; there was no swelling; and I was not aware that, either by violence, or accident, or any other ostensible cause, I had given rise to this local complaint. My health was otherwise good.

In the course of the first night the pain diminished, but I felt it as soon and as often as I woke, and I dreamt about it. On the morning of the 4th of July, while standing to dress, the pain seemed much more bearable, and the spasms were not so frequent. By twelve o'clock, however, the pain got worse, whether I was sitting or standing, and by night it became again so intently acute, that I could scarcely bear it. This determined me on applying a strong antidynous lotion on the following morning, if the pain did not disappear or subside during the night. The application was effected on the third morning of the attack, and I selected the moment when the spasm, oscillating, as it appeared to my feelings, with acutely painful vibrations among the fibres of the muscles, seemed to be at its worst. The application of the lotion lasted two minutes and a half, during which time the pain and the spasm subsided, leaving the part red-hot (so to speak), without any blister, and perfectly restored to its natural tone. Every now and then, perhaps five times in the whole course of that day, I felt the twitchings in the part, but very faint and deep seated. Even these, however, had completely subsided, without any further remedy, before night; and the complaint has never visited me since.

CASES XVI. AND XVII.

Obscure, permanent, and occasionally exasperated pain of the right and left arm.

A nobleman, aged about 60 years, in whose family I have attended professionally for more than twenty years, and whose physical constitution, therefore, is well known to me, was suddenly seised, about four years ago, with an acute pain in the fleshy part of the right arm, sometimes ascending to the shoulder, but more frequently shooting down to the elbow and wrist, without, however, extending to the fingers. Although the pain became permanent after a few days, in spite of every species of fomentation and other local applications, and seemed to be of one uniform degree of intensity,—it used at times to increase very considerably, and then

its transmission from the top of the arm to the wrist was rapid, so as to be compared by the patient to the quick transmission of an electric shock in the same direction. The general health in the mean time appeared to have suffered little or nothing from this local complaint; and yet, in order to be on the safe side, and rather to satisfy the patient than from my own conviction of its necessity, the digestive organs were attended to medically, hoping that the pain might thereby be mitigated. The expectation was vain. The pain continued unabated for several weeks, and nothing seemed either to relieve it, or to throw any light on its nature and origin. Having on a former occasion seen me apply an ammoniated antidynous embrocation to a relative of his, who had been suffering from a nervous pain, which was shortly removed, the patient took upon himself to use some of the same, while absent from town; and in the space of ten minutes he succeeded in mitigating his pain so much, that it became not only bearable from that moment, but insignificant on the second day, and by the end of the week it had entirely left him. A very large blister was the result of this first and only application, which discharged very considerably, and from mismanagement, became troublesome for about a week, as I was informed afterwards: but this at last healed, and with the cicatrization of the surface every vestige of the old pain left the arm, nor has it ever returned since.

A gentleman filling a considerable situation under government, subject to fulness of blood in the head, and to repeated attacks of dyspepsia, whose duties require a sedentary life, was awoke one night in the spring of 1833, with a very acute pain in the left elbow, shooting down to the wrist and tip of the fingers, the latter of which felt numbed and without sensibility; while, on the contrary, the part of the arm most affected seemed to be pervaded by an unusual degree of heat, which however was not distinguishable by the touch. I held this pain, on inquiry, to be symptomatic of a foul and loaded stomach, and of a general deranged state of the intestines. Accordingly, a suitable and powerful course of remedies was begun, which relieved the system generally,—at that time labouring under an unusually billious attack,—but which failed to remove the pain in the arm, or restore the natural feeling in the fingers. Not to enlarge unnecessarily on this case, I may state in a few words, that even at the expiration of some months after the general health had been quite restored, and after every possible means had been resorted to for the purpose of alleviating pain in the arm, the latter symptom continued unabated; until at length, an antidynous embrocation being applied, at first on the inside of the arm, considerably above the elbow, and a second time within the bend of the arm, (without exciting vesication) the pain was completely subdued; but as yet, and at the end of six years, the natural acute feeling in the tips of the fingers has not completely returned.

4.—SPASMS AND CONVULSIONS.

It is not easy to define what is meant by spasms, and what by convulsions, as terms distinct from each other. Both imply, in common parlance, a joint affection of nerves and muscles; the primary seat of the disease in each case being the nervous system, and the seat of the manifestation of the disease in each case being the muscular system; pain more or less acute accompanying necessarily both disorders. They may therefore be assumed to be modifications of one and the same morbid affection, with this further difference—that whereas the term spasm is generally employed to denote a convulsion of a limited part of the body,—the term convulsion is more commonly used to convey the idea of a patient whom we might imagine to be attacked with spasm all over the body. This explanation has no pretence to be either classically scientific, or strictly physiological, but must be taken simply as an exposition of the visible characters of the two complaints in question. It may be added that pain which, as was before stated, accompanies both, is more acute in the first than in the second disorder; and that were any danger attends either,—in the case of spasms it is the acuteness of the pain which may be considered as forming the source of danger; whereas, it is in the protracted contractions of the muscular fibres, and the consequent disturbance in the circulation of the blood through the vessels pressed upon by those contractions, that the danger consists. Thus, for example, in an attack of spasm of the stomach or of the heart, the pain is super-exquisitely acute, and often kills the miserable sufferer in a very short time; whereas in convulsions of childbed women, the protracted contractions and struggles ensuing therefrom, give rise to accumulations of blood in the cavities of the heart and vessels of the brain, which lead to destruction. Hence, again, in treating these very cases of disease, we see that, if we attempt to relieve the pain in the former by the lancet, we destroy the patient; whereas it is by the lancet only that the patient in the latter case can be saved.

With these few popular and practical distinctions respecting two of the most important species of nervous affections—important because of the danger that attaches to them—important because they have often baffled the best treatment—important also because they have offered an ample field to prove the efficacy of the counter-irritating plan of treating them—I proceed to narrate some interesting examples of the two disorders, tending to evince the superiority of the much neglected ammoniated counter-irritants in both, but more especially in the cases of spasms. With the ordinary mode of treating these disorders I need not trouble my readers; for the curious in such matters may consult many very valuable works of modern date, on nervous disorders,—particularly those of Sir Charles Bell, Mr. Swan, Bellingeri, and others, in which several treatments are detailed. But I cannot pass over altogether unnoticed

the more recent introduction into this country of the mode of treating nervous pains and spasmodic complaints by the alcaloid medicaments, made up into ointments, and applied externally. That the active principles of the several acrid and vegetable poisons thus employed have been useful in several instances, is not to be denied; but it cannot at the same time be concealed, that their use is attended with danger; and I have known instances where, even under the direction of the practitioner most conversant with such preparations, patients have been exposed to considerable risk. In regard to one of these new alcaloid medicaments, *delphinia* for instance, I have the authority of Dr Paris for stating that one grain of it, in a dram of ointment, rubbed on the part of the body affected by *tic douloureux*, will relieve that complaint. But he adds, that where spasm is present at the same time, both that substance and *strychnia* will do harm. On the whole, he has seen great mischief arise from the general and inconsiderate employment of the poisonous alcaloids so much in fashion nowadays in the treatment of neuralgic affections.

The first of the cases I am about to relate is one which on every account will be found to merit serious attention. The individual who is the subject of it has emptied indeed, to the very dregs, the bitter cup of suffering; first, on account of the bodily pain,—acute, persevering, and almost destructive,—which has formed the salient type of her complaint; secondly, on account of the repeated relapses of the complaint, at periods when health seemed almost completely restored; and thirdly, on account of the unwarrantable manner in which the case was dragged before the public on a recent occasion, distorted, exaggerated, and altogether represented to be what it never in reality was,—a mysterious and a mystical ailment. All this the individual in question has borne with fortitude, resignation, and that serenity of mind which is the surest means of promoting and finally securing complete recovery. At least I will vouch that, as far as I have been professionally connected with the case, either during actual personal observation and attendance, or, when I was not in attendance, by means of reports from the best witnesses,—the portrait I have here given of the patient and of her bearings is in no way distorted.

CASE XVIII.

Diurnal spasm of the lumbo-dorsal and cervical nerves, accompanied by difficulty of breathing, palpitation, and a sense of suffocation.

The Countess of ———, a married lady, closely allied to two of the first families in this country, was placed under my care on the 12th of March, 1835, on account of what was described to be a spasmodic complaint of the back, attended by acute pain, under which she had suffered for eight months, notwithstanding the assiduous and skilful care of Sir Charles M. Clark, Mr. Copland, and others, as well as of the late Dr. Hugh Ley, who was considered in

the light of family physician, and had attended her ladyship in her first confinement the year before. On the day in question, having first ascertained, at the commencement of my visit, that the patient was no longer under any other medical advice than that of Dr. Ley,—who during his then temporary indisposition, had left it open to the family to consult any medical gentlemen they pleased,—I enquired into the history of the case, first, from the mother of the lady, and next from the patient herself, whom I found considerably reduced in flesh, unable to walk upright, and in a state of health far from satisfactory, notwithstanding her good spirits. Their history was afterwards confirmed by a full written statement of the origin and progress of the complaint, with which the patient favoured me; but to which I shall not refer (as immaterial to the object of my narrative) except merely to remark, that the beginning of the complaint was dated from a sudden and severe chill, caught at a water party in the month of July of the preceding year. From that period to the one at which I first saw the patient, the mere pain in the back,—with which the disease had begun,—by the gradual deteriorations of health which took place in different parts of the country, at different periods, and under different treatments, (while attended by some of the most experienced practitioners)—had assumed the formidable, and, to all appearance, unconquerable form under which it afterwards presented itself to my notice.

Turning now aside all collateral or extraneous matter as not necessary to our purpose, I will proceed at once to describe the state in which I found the patient, when the paroxysm of spasm and pain was full upon her. I had the first day promised to call again in the evening, so as to contrive to be in attendance by half-past eight o'clock—a little before the hour on which an attack was declared to come on every day. Some engagement, however, detained me for a few minutes beyond that hour. After entering the house, and while ascending the stairs, the first sounds that struck my ears were the loud moanings, and sobbings, and expressions of pain, which seemed to come from the second or bedroom floor, and which, as it turned out, were the loud expressions of suffering uttered by the devoted patient, on whom the attack had that evening come rather unexpectedly, and by several minutes sooner than the ordinary time.

When I entered the chamber, in which were the Duchess of ———, the lady's mother, and a female attendant, the agony of the patient must have been excessive,—judging by her contortions, the agitation and cramping of her limbs, and the severe pain of which she complained. She was laid flat on a couch, and her spine examined, when it was found that the whole length of it seemed in motion,—representing not unaptly, the annular movements of a snake. Even the iliac bones were drawn up and down with a jerk and violence of motion, such as I had never seen before, and should have deemed almost impossible, had I not seen it. The pain, like the electric fluid, shot up along the backbone into the occiput, and

thence through the head into the globes of the eyes, which became painful, rolled violently in their sockets, and gave a dismal character to the face, itself greatly agitated. The patient could just mutter a few words in answer to my questions, from which I learned that pain was then pervading the shoulders and arms as well as the lower extremities; that the surface of the abdomen felt sore on the slightest pressure, and especially so in the position she was then placed; lastly, that she experienced a sense of suffocation in the chest. There came on, while I was present, a severe cramp in the calves of the legs, and the feet felt very cold to the touch. As to the pulse, I found it next to impossible to count it, and the movements of the heart were equally rapid and irregular. Such was the violence of the attack, that although I endeavoured to press with some degree of firmness upon the back-bone, so as to keep it down in its natural position,—one of the many convulsive throes or spasmodic leaps of that part occurred more than once, which, by bending the spine almost double, anteriorly, threw off like an inferior weight the pressure of my hands. The scene was truly heart-rending, and not to be described in words. I prescribed and sent for a moderately strong ammoniated lotion,—considering this to be a case in which such a counter-irritant might be of great service. I explained, in the mean while, the nature of the proposed remedy; and the effect I hoped it might produce; although I could not venture to answer for the fulfilment of my expectations. Trusting that there might not exist any real local and substantial disorder of any of the nerves (organic,) but that the whole train of nervous suffering was one connected by sympathy with portions of structure then, and for many months in a state of irritation,—I had a right to assume, agreeably to my experience, that the embrocation I tendered would allay, if not altogether arrest, the agonies under which the fair patient was writhing.

The preparation came, and I instantly applied a thick compress of linen, three inches square saturated with it, on a portion of the spinal column, above the place which had been cupped and blistered during previous treatments. The watch was held by the mother. In three seconds the moaning ceased; in five seconds more the patient heaved a deep sigh; before the first minute elapsed, she said that “the pain was going,” and presently “that it was gone.” She exclaimed at the same time that “the application was a blessing; it smarted much, but was a pleasure to her.” Two or three more deep sighs followed, which, I concluded, announced the cessation of the paroxysm. On enquiry afterwards, I learned that in general the diurnal paroxysms, which always lasted three hours, terminated in a succession of deep sighs. Wishing to make the matter more certain, I applied the same compress, still rather wet, on another and a little higher spot, and on a third place still higher, after having supplied the compress with a small quantity of fresh lotion. Altogether the three applications lasted three and a half minutes, during which the whole extent of the surface of the back-bone became red

and hot, but no immediate blister followed. Whether or not one might have risen had I prolonged the application, I could not, nor would I answer for. I left on the part the napkin which had served to keep down the compress, and which was moist with part of the lotion, in order to maintain, for a little while longer, the artificial counter-irritation; and I desired that if a blister ensued, the cuticle should not be broken; for which reason I requested the patient would sleep on her right side, and upon a cool and hard mattress, without an under-blanket. I further directed that no medicine whatever should be taken; to which the patient readily agreed, as she had already, of her own accord, determined not to take some assafœtida pills, which had been a few days before prescribed for her.

On the following morning I found that the patient had passed the whole night without any return of pain or spasm. At this second visit, Dr. H. Ley, whom I accidentally met in the street, accompanied me. He had seen the patient early in the morning, and learned from her the almost magical quickness with which the paroxysm had been put an end to on the previous night. When I explained to him, in the presence of the patient, as well as of the Duke and Duchess of —, her father and mother, the simple combination (65) of the counter-irritant by which the success had been obtained, he was rather surprised that the same application should not have been thought of for his patient before; the more so as the idea of relieving her by the ordinary counter-irritants had not only been entertained, but acted upon, with very imperfect and only temporary effect. This last circumstance inclined him to fear, that even with the more powerful agent, now so successfully employed, the benefit might prove of short duration only.

Following up my notion of counter-irritation, I proposed, with the view to prevent further attacks, to excite and keep up rubefaction, and even vesication, if necessary, on the insteps. This being agreed to by Dr. Ley, the wet compresses were applied and tied firmly down to the insteps; but owing to the feet being exceedingly chilly, no sensible effect was produced by the lotion until at the expiration of nearly twenty minutes. In the evening no attack came on. The application being repeated on the feet, they smarted greatly this time in a very few minutes, owing to their having been made warm and sensitive by the first application in the morning. The only medicine I prescribed at this visit was a simple manna draught for the morning.

It would be useless, and it is not my intention, to detail the further history of this most interesting case day by day. From the 13th to the 21st no sort of attack or spasm came on. On the latter day, in the morning, having seen reason to apprehend a return of the complaint, I proposed to the patient a consultation for the evening, at which Dr. Ley and the earl her husband were present. There were then serious threatenings of a return of the spasm, which were realised at half after nine o'clock. Being immediately

placed in the same position as before, the counter-irritant was applied to the lumbar region, and pressed down with firmness. In one minute, by Dr. Ley's watch, the spasm stopped, and with it all further suffering. I repeated the application upon two other places, which smarted much in consequence of it; but no blister was produced. The patient soon after was left to herself, quite cheerful and comfortable.

Two other attacks took place between the 21st of March and the 17th of April, in each of which the pain, as well as the spasmodic action, was stopped within a minute of time, by the counter-irritant, in the same manner as before. Of the four attacks in five weeks (instead of one every day,) which the patient had had since my first adoption of the counter-irritating plan of treatment, two had extended to the posterior region of the head, from the very first moment of their appearance. In one of these the pain continued almost insupportable for upwards of half an hour, before the counter-irritant was applied; as I was not within reach for that purpose: but when at last it was applied, the spasmodic pain in the cerebellum or occipital region, ceased as instantaneously as in all the previous paroxysms; so that the head got well, although the embrocation was put on the lumbar or lower portion of the spine only.

In the course of the five weeks alluded to, the general health of the patient improved daily and visibly; her strength, her appetite, her appearance all improved; and having recovered at the same time the use of her feet, the back having become quite straight, and no symptom of nervous suffering being present, Lady —— was handed down into the drawing-room on the 2d of April; being the first time she had used her limbs for many months. This general amendment went on progressing from week to week, notwithstanding several occasional drawbacks of local pains, bilious derangements, indigestion, &c., until the 30th of May, when I took my leave of my patient,—who by this time had returned into society, and had joined in all its festivities, like one who had never been indisposed.

As the object in relating this case is to show in a forcible manner the powerful agency of the ammoniated counter-irritants, in the cure of painful and spasmodic affections of the nerves, when all other remedies have failed, I shall not touch upon either the previous or subsequent part of its history. I felt satisfied in my mind that the causes to which I ascribed the attacks I had succeeded in curing, were sufficient to account for the disease, and that they would again and again reproduce it, if at any time they were once more put in action: and I felt equally satisfied that those causes, by producing such spasms as I had seen, clearly pointed out the primary seat of the nervous disturbance. Those points once determined in my mind, it was my duty to act in accordance with them, and to give my directions, advice and cautions to the patient, consistently with the conclusions I had formed. The sequel of the case (which, however, no longer belongs to my province) has fully

corroborated the truth and correctness of my opinions. This lady, who has, since her recovery under my care, become a second time a mother, has had, I understand, returns of her spasms on more than one occasion, in Scotland, in the country, in London, and on the continent. With the details of those attacks, or how they were treated, or with the reason which led to the non-adoption of the plan so successfully employed by myself in a previous attack, I profess not to be acquainted. All I regret and deplore is, that so satisfactory, so complete, so universally admitted a recovery as the one effected in the spring of 1835, when health long lost had been restored, and an invalid of many months had been sent back into society like any other healthy individual,—should have been suddenly put an end to, after six months' duration, by causes totally unconnected with any failure in the powerful agency of the remedy I had employed to obtain it.

But although with the first recovery of the patient my professional attendance ever after ceased, the recollection of the benefit derived by my treatment of her did not fail to make her wish to afford the benefit of the like treatment to one of her relatives. The language in which that benefit is solicited, is at once the best proof of its reality, and of its value in the case of the patient herself, who thus tenders her unsolicited testimony of the success of my practice. In a letter written by Lady —, some time in the summer of last year (that is just two years after her recovery under my care,) her ladyship thus expresses herself:—"My dear sir,—I venture to trouble you with these few lines, to ask you if you know any remedy for cramp. I have a young relative of mine, who suffers torture from it in her limbs, stomach and head; and considering the most wonderful manner in which you stopped my spasms, I apply to you in the hopes you may suggest some outward application likely to check these dreadful attacks, &c. &c." This was gratifying.

The strongest and most flattering testimony, however, for a physician, who, having done his utmost to benefit a patient by his art, and having taken the deepest interest in the case of that patient, has had the good fortune to conclude his professional attendance with success, (whether that success secure to him or not the gratitude of his patient) is to be found in those spontaneous effusions of acknowledgment and thanks which one may generally expect from the liberal-minded and highly-educated relatives of the sufferer, while yet the benefit obtained is fresh in their remembrance. This testimony it was my good fortune to receive from the Earl of —, three weeks after I had taken leave of his lady; and I shall treasure up his letter along with other documents of the same character, to which, in the wane of my professional life, I shall revert with satisfaction. Although it will probably be said that it ill became me to insert that letter in this place, considering the very flattering terms in which the noble writer has chosen to express his gratitude in it, yet, as it contains the most frank as well as emphatic admission of the complete recovery of his consort, and forms consequently the

best conclusion to the narrative of her case, I have taken the liberty of inserting it:—

“ _____,
June 22, 1835.

“ My dear Sir,—I cannot send the enclosed, without at the same time endeavouring to express the sentiment of obligation which I feel to you, not only for your most valuable and valued services, but for the undeviating anxiety and attention which you have displayed during your attendance upon Lady ——’s difficult and trying case. To you she owes, as far as medical skill is concerned, the restoration to health,—and I will only add that both she and I shall ever entertain the greatest gratitude for so inestimable a benefit. Believe me to be,

“ My dear sir, yours very truly,

“ _____.”

The only comment I have to offer on this most important example of nervous disease, is to wind up my narrative of its history in the language of the suffering patient herself—language which will convey, more forcibly than I have done, some of the characteristic features of her complaint. Having requested her ladyship, the moment she began to prosper under the counter-irritating treatment, to supply me with a written statement of the origin and progress of her sufferings, she proceeded to comply with my request, and from her full statement I select these few sentences:—“ My nervousness increased every day until the end of December, 1834, when the spasms which I had suffered a few weeks before again returned, and never left me until your first visit early in March, when you stopped them with such miraculous expedition. They generally came on every evening between nine and eleven o’clock, although sometimes they would miss a day or two. The describing any thing like the degree of pain I suffered is *impossible*. Neither description nor idea can come up to such a reality. I will, however, endeavour to put down a few of my feelings. I was always able to tell for hours before, whether I was likely to have an attack or not. I generally felt cold and hot alternately; my feet were mostly numbed and as cold as ice; I started every minute, and felt a sort of contraction of the nerves, attended with strong muscular efforts and contortions. The pain appeared to begin in my back, and to shoot across to my stomach and side. *It seemed as if knives were running from every vertebra inwardly*, and shooting up to my head, not like a common headache, but like a pain at the back of the head, which darted through the brain to the ball of the eyes. Besides all these shooting pains during the spasms, I always felt as if the spinal marrow (I believe the inside of the spine is so called) was *burning and melting*. The vessels connected with it felt overcharged, and it appeared to me as if the nerves and muscles were twisted and knotted together, pulling me in different directions, with pain in the sides which drew me down most violently,

and a sensation withal, that made me think my back-bone must be crushed or broken," &c. &c.

These unheard-of sufferings then, which for six months had baffled all medical skill and every medicine, yielded in a few minutes to the external application of a preparation of ammonia! Surely, even if no other good had ever resulted from such preparations, when properly and suitably used, this instantaneous putting an end to a never-failing coming on of pain, day after day—this rescuing of the victim of that pain from its excruciating tortures for months together—even these things, I say, invest such preparations with a sufficiently strong claim to the immediate attention of the profession and the public.

CASE XIX.

Spasmodic attacks in the renal portion of the back mistaken for an affection of the kidneys.

Count ———, a young foreign nobleman who had not always taken the best care of his health, and whose constitution had at first been impaired by the climate of this country, was seized, sometime in the spring of 1830, with acute, thrilling, and *drawing* pain, a little above the edge of the hip-bone on each side of the spine, which it seemed also to involve. A feeling of contraction, or of an inward puckering up of parts, accompanied each attack,—which, from being at first short and not very frequent, became afterwards longer in duration, as well as of more frequent occurrence. No plausible cause could be assigned for the attacks. It is needless to recapitulate all the various steps and measures the patient had been desired to adopt, with the view to his recovery; for none of them seemed to have made any impression on the pain. Some medical men, indeed, (and among them the late skilful surgeon Mr. Rose) having imagined that the attack might be referred to the presence of gravel, or a calculus in the kidneys, or to inflammation in the cavities of those excreting organs, leeches, cupping, and the ordinary counter-irritants had been applied on the painful part. The success was not encouraging, and the patient was about to make up his mind to bear his sufferings without murmuring and with resignation, when I proposed to him the use of the ammoniated lotion. The proposition being acceded to, we had immediate and ample reason to be satisfied with the result; for at each application, which was rendered necessary from time to time by the succession of paroxysms of pain, the lotion arrested it almost instantaneously, thereby shortening the usual period of suffering, from several hours to a few minutes. That the neuralgic pain thus controlled by the counter-irritant, was dependent on some general cause, not within the influence of that application, is more than probable, seeing that the paroxysms continued to recur (although at longer intervals) in spite of its powerful agency in stopping them when once they had begun. Still it is a fact, that but for the agency in question the

patient must have gone on suffering hours of agony, which no other remedy appeared capable of alleviating. Accordingly I learned afterwards from the patient, that he never traveled to any distance from town without carrying with him a small supply of the lotion; and although now, at the distance of some years (having recovered his general health and natural strength during a short residence on the continent,) Count ——— can boast of being free from the attacks of his former complaint of the nerves, as he has lately assured me,—yet he never fails to use the counter-irritating lotion, if the slightest indication of pain comes on in the old place, and always with the same instantaneous good effect.

CASE XX.

Spasm and convulsive thrilling of the nerves and muscles in the right side of the back.

An unmarried lady, aged between forty and fifty years, residing with a most affectionate sister not far from Cavendish square, had for many years laboured under frequent attacks of hemicrania, dependent on a thoroughly deranged state of digestion, although no person could live more cautiously or temperately than she had done all her life. A few years back she became subject to affections of the trachea and bronchia, in several attacks of which, her medical attendants, and myself among them, were compelled to use the lancet rather freely. Of this tendency to attacks in the chest and throat, the patient had in a great degree been able to set herself free within the last two or three years, and with that tendency went away likewise the liability to frequent sick and nervous headaches, and to general derangement of the stomach. But in lieu of all this, a singular kind of seizure of the nerves and muscles of the right super-renal region has set in (1836), which, during the last eighteenth months, has, on many occasions, required medical assistance. As no other professional person but myself, except when she resides in the country, has attended this lady for the last eighteen years, her constitution is thoroughly known to me; and the new garb, therefore, which her natural disposition to congestive accumulation of blood (producing pressure on the nerves, and consequent pain) assumed in the present attacks, was not likely to mislead me. Medicines were accordingly prescribed to remove the congestion, and by means of local as well as general evacuants and depletion, we obtained a notable relief from suffering. It was remarked that pressure hardly increased the existing pain, unless the part was pushed inwardly with considerable firmness and perseverance; and also, that if the patient, immediately upon the coming on of an attack, laid herself down in a horizontal posture, the pain became soon very bearable. With all these contrivances and means, however, the real bodily suffering, during each paroxysm, never diminishes in so short a time as when the

strongest combination of ammoniated counter-irritants is applied to the part, and firmly pressed upon it for the space of five or eight minutes. For, although the requisite remedies prescribed to cure the disease, have each time succeeded in that object at the expiration of a few days, the spasmodic or nervous pain in the part, as already described, has nevertheless continued in a greater or lesser degree, during the whole period of the cure, unless the assistance of the counter-irritant in question has been had recourse to. That it has not been resorted to on all occasions, was owing to the apprehension of its forming a blister, as had been the case once or twice, in consequence of having left the application on the part too long. But such omissions have been of very rare occurrence; for the patient is now intimately persuaded of the immense advantage of cutting short, by so simple a remedy as the antidynous lotion, a pain which is described, as nearly as possible, to be like that of the worst description of internal *tic douloureux*. This is so much her present persuasion, that in two or three of the later attacks (all of which had exhibited a gradual diminution in their intensity), she has herself had recourse to the ammoniated counter-irritant, without requiring my aid, and with the desired effect.

CASE XXI.

A similar attack as in the preceding case, coming on in the left super-renal portion of the back.

The subject of this case was also an unmarried lady, nearly double the age of the preceding patient, being eighty-six years old, and of a robust constitution, though delicate in appearance. During the last nineteen years that I have had the honour of attending this lady professionally, I had occasion to notice, as a predominant feature in her constitution, a tendency to fulness of blood in the head, as well as to a disturbed circulation, particularly in the heart. Cupping, and even bleeding at the arm, have been often resorted to, and always with success; and as she has advanced in years, the fulness in the head, as well as the pain and palpitation of the heart, have gradually disappeared. The only general trait of a morbid description, if it be one, remaining in her constitution at present, is an obstinate habit of constipation, which ought not to surprise us, considering the sedentary life she leads, with few opportunities of out-of-door exercise or airings. About two years and a half ago, feeling uneasy respecting a small tumour that had appeared near the surface of the body in the thoracic region, and had kept forming in spite of all care and appropriate remedies, I suggested the propriety of its removal, to prevent serious consequences. Accordingly, my late lamented friend, Mr. Earle, was consulted at my request, who, after two examinations of the part, agreed with me in considering the tumour as likely to assume a malignant character, and as one which ought to

be removed, did but the age of the patient warrant the operation.¹ To the performance of it, however, I took upon myself to encourage that skilful surgeon, assuring him at the same time of the otherwise sound state of health of the lady, and of the pure elasticity of her frame. The patient herself became eager for its performance, and would brook no delay; so that finally the tumour was removed, with the part in which it was seated, by an operation that lasted only some minutes, and from the effects of which her ladyship completely recovered in the course of six weeks. The careful investigation of the tumour itself, after its abstraction, fully proved the propriety and necessity of what had been done. In another twelvemonth the lady would inevitably have perished under excruciating tortures. Why I have entered into all these particulars, will appear evident in the sequel of the present narrative.

For nearly two years after the operation, the patient seemed to enjoy immunity from every complaint; when one day in the course of the last winter, after a rather tedious attack of influenza, and when I had just taken my leave, her ladyship was suddenly seized with a most excruciating pain in the left region of the back, midway between the upper edge of the ilium, or hip bone, and the lowest of the true ribs, close upon the spinal column. The attack was accompanied by no symptoms which could denote an affection of the kidney, or any of its annexes, but it soon brought on tremor, spasm, and considerable fulness in the pulse. The patient was cupped; and for that night the pain seemed lulled by the withdrawal of blood. Soon, however, the symptoms, indicative of congestive inflammation keeping up spasmodic action, appeared again, and the patient was bled by Mr. Brown, besides taking all such other remedies as in cases of this kind a medical man thinks himself justified in prescribing. The blood drawn was not only thickly buffed, but highly contracted, or *globularly cupped*. All these successive steps of the treatment seemed to produce corresponding good effects on the main disease, without curtailing much the strength of the patient, who was desired to keep her bed. But the pain was still there; it darted from place to place; it penetrated into the interior; it shot downwards into the sacrum; it ascended towards the region of the heart; it caused a species of paralytic tremor of the hand, and a chattering of the teeth; it was not forgotten during sleep; it was ever present during the waking hours; and when the finger searched carefully the spot, if it pressed upon that spot, the pain was somewhat increased. Might not this be a state of things denoting some morbid formation in the interior, analogous to the tumour that had been removed from the surface on the same side, though much higher up, two years

¹ Another consideration restrained Mr. Earle in this case. The numerous connections of the patient with some of the first families in the kingdom, might, he feared, deem it a rash act to proceed to a surgical operation of such importance in a person so far advanced in years.

before? I left Sir B. Brodie, whom I called in consultation, to determine that point. Sir Benjamin minutely examined and enquired into the case. He brought the result of his long experience to bear on the question; and although he admitted that there was in some of the symptoms sufficient warranty for entertaining the apprehension I had expressed, and also, that in two instances which had come under his notice, he had known the formation of an inward malignant tumour to occur a long time after the removal of another similar tumour from the surface of the body; still he was disposed to think differently and more favourably of the present case. The treatment, however, which had hitherto been pursued, was to be continued, and an external counter-irritant applied, if I thought it necessary.

To the latter alternative we were soon reduced, in consequence of the gnawing and spasmodic painful twitchings proceeding with persevering obstinacy. And yet no corresponding tokens of fulness or inflammation were present at the same time! The other functions, moreover, had been brought to a natural standard, but the patient nevertheless suffered still, and suffered greatly. Under these circumstances, considering that rapidity of effect was desirable, I preferred an ammoniated counter-irritant to an ordinary blister, and it was applied accordingly, with the same instantaneous good effect, *cessation of pain*, which I have always seen it to produce. The application left a blister in this case, which discharged for some days; but the acute and spasmodic pain never again returned. Her ladyship is now once more, and for the last two months has been, in her usual state of health.

CASE XXII.

Larval spasm, or contraction of the muscles of the right side of the face.

I have designated as "larval," an attack of spasm or nervous affection of certain of the muscles of the face, which at once, and during the time the disease lasts, disfigures the countenance, and gives to it the appearance of a hideous *mask*. Such attacks generally come on unawares, and they spare neither young nor old people—neither the one nor the other sex. Yet they are not of very frequent occurrence, and must not be confounded with that disturbance of the symmetry of the face which, in older persons, is produced by cerebral or cerebellic palsy. An attack of larval spasm is not always accompanied by pain, nor are the parts affected by it morbidly sensitive, except to cold air and sudden draughts of wind. The case I am about briefly to relate, may be taken as a specimen of the general character of this species of nervous affection. A young lady, the daughter of a parochial clergyman in a populous district, awoke at her usual hour one morning in July, 1836, with a somewhat odd sensation about the mouth and right cheek, which instinctively brought her hand to the part, when she fancied she could feel a wrinkled and rigid

state of the muscles, that excited her alarm. She rose from the bed, and ran to consult her mirror, in which, to her great horror, she saw reflected a hideous face. The mouth was drawn to the right side, in an oblique upward direction, pushing up the muscles and skin of the cheek between the upper lip and the eye; the lower lid of which was drawn down at the same time, and almost everted. Some of the side teeth on the right were thus uncovered; while the front teeth, on the contrary, were partially concealed by the moveable covering of the left cheek, which was dragged towards the central line of the face, by the spasmodic contraction of the right cheek. In this state I saw the patient, who was brought to town to consult me, from a distance of many miles, after having been submitted in vain to *every* species of treatment, including veratria and galvanism, but exclusive of homœopathism and magnetism. This singular spasmodic affection had lasted nearly three months; nor had it, in the course of that time, shown any tendency to relax, except when blisters were applied to the affected cheek; an operation which was performed on three separate occasions. I collected, from a written statement placed in my hands by the mother, that a sufficient cause connected with the general health of the young lady was supposed to have existed for the attack; but it was added that great disappointment had been experienced on finding the attack subborn and unyielding, after that cause had been removed, and the general health restored. On questioning the patient herself, I imagined that the real existing cause of the attack had probably been a protracted action, on the right cheek, of the cool night air, to which that side of the face had been suddenly exposed, in consequence of the young lady seating herself, at the conclusion of a very heating dance, in the recess of a window, the sash of which was partially thrown up, and presenting her right side to the coming-in draught. Be that as it may, the local affection, as I before remarked, had continued unmitigated when I first saw it; although the patient seemed in excellent health. Her aspect was truly distressing to behold, and my readers will form an approximating idea of it, if they can fancy all that is moveable in the right side of the face—the half of the mouth, to wit, the cheek, and the lower eyelid—fitted up inside with strings, obliquely directed towards the temple, and there passed through a single pulley, and drawn up through it, and in that state kept fixed for three months. The representation would by no means be an exaggerated one. The patient was in good spirits, however, and liked to talk, although her speech and the sound of it were much affected. Her pulse was natural, and the movements of respiration and deglutition were performed without difficulty. I had seen two cases somewhat analogous, many years before, which had given way to repeated doses of calomel, and the combined action of blisters; but in the present instance these means had been already resorted to, with hardly any beneficial effect. It would have been useless, therefore, to have proposed them again. Recol-

lecting the success I had met with in the case of the locked jaw the year before, I suggested a strong ammoniated counter-irritant, and applied it, as soon as it could be procured, to the right temple, as well as to the posterior part of the head; for which latter object some of the hair was cut off. The application lasted ten minutes. It produced pain, which extended into the orbit, and down the cheek; but no vesication followed, although all the parts were of an intense crimson colour. No appreciable change in the contractions was observed at that time; but in the evening of the same day, when the mother went, as was customary with her, to bid good night to her child, she found her already sound asleep; and *the right eye completely and naturally closed*—a circumstance she had not before noticed for three months. This information encouraged me, at the next visit, to repeat the counter-irritant on the occiput, and also immediately behind the ear. The surface of the right temple was too sore to admit of a second application. This time, after a quarter of an hour, the lotion raised a large blister on the back of the head, which soon filled, and was preserved intact. But while this process was going on, the contracted muscles of the cheeks relaxed, and the mouth returned very nearly to its wonted position and dimensions. No further application was used afterwards, and the complaint gradually subsided, until it entirely disappeared in the course of a week from the time of the first application of the ammoniated counter-irritant.

I have since heard of another and a recent case, similar in many respects to this, except that the attack was on the left instead of the right cheek. It occurred in a family with whom I am acquainted, although I did not see the patient. In that instance, too, Dr. Chambers and Sir B. Brodie (as I understand) employed calomel freely, and ordinary vesication, by means of which they completely cured the complaint, though not quite so quickly as in a week's time; still sufficiently so as to warrant me in pressing their case into my service, as another example of the great advantage that may be derived from counter-irritation, judiciously and perseveringly pursued, in the treatment of nervo-muscular spasms.

5.—EPILEPSY.

Who is there among my readers, acquainted with the singular as well as distressing character of this complaint (so well known in every class of the community), who is not, at the same time, aware of the great difficulty of curing it, and of the inefficacy of almost all the remedies suggested and employed against it during many centuries? Still a very great step in advance has been made within the last twenty-five years in the treatment of so obstinate a malady; and it is to the minute anatomical investigations that have been made respecting it in foreign countries, where some of the very best and most valuable works on the subject have been published, that that step is due. The first and leading improvement in this

question has been the settlement of the long-debated point, touching the seat of the disorder; the next has been that of determining, by positive demonstration, the existence of a real and a sympathetic epilepsy. It is now pretty generally admitted, that the former is developed under the pressure of a certain morbid affection of the spinal cord, and of the roots of its nerves, during which there is a gradual softening of their substance; while the latter consists in a morbid action only of those organs, momentarily provoked by some original disorder, extant in one or other of the principal viscera of the body. This distinction between the two modes of disease, as well as the discovery of the seat of *true* epilepsy, is of the utmost importance, and both are due to modern science. They have led, as might have been expected, to a corresponding change, and, one may freely assert, to an improvement, in the manner of treating the real as well as the *mock* disease; and I hold that counter-irritation is foremost in the list of the more successful means very recently employed for their removal. My experience in this respect has been extensive; and I entirely coincide with such of the very able writers on epileptic disorders as affirm, that no good can be effected in them, unless external means be employed to change the morbid condition of the spinal system. I will relate one or two cases taken from the experience of continental writers, before I bring forward any from my own practice.

CASE XXIII.

Sympathetic Epilepsy.

A young woman was presented in 1837 to Professor Esquirol, at the Salpêtrière Hospital for Female Lunatics, near Paris, during my visits to that establishment, who had for some years been suffering from epileptic fits every four weeks, at particular periods, and who had been treated for them by some of the first medical men in the metropolis. Esquirol had at this time under his care, in the above-named asylum, a whole ward of epileptic patients, on whom he used to make cautious and proper trials of every species of treatment which the faculty, whether national or foreign, recommended from time to time—such as that by nitrate of silver, tartar emetic, and sulphate of zinc. But as he had not hitherto obtained any appreciable good result, he determined on managing the present case differently. For this determination he considered himself warranted, by the repeated observations he had made, in cases where the patients had died in consequence of severe paroxysms of epilepsy, and in most, if not all of them, he had found the superior portion of the spinal cord in a softened condition, and of a gray or rosy colour. Such a state of things induced him to believe that the employment of counter-irritation in the shape of the moxa, applied several times over the vertebræ, might afford a better chance of recovery. He therefore acted on that principle; and he was not long in discovering the correctness of his reasoning, by

the success of this treatment. The paroxysms of the disease in the course of the first few months became less frequent, and of much shorter duration, until at last they ceased altogether.

Professor Esquirol recorded this case in a memoir, which he read in 1817, before the *Société de la Faculté de Médecine*, in Paris, on which occasion I had the honour of being present as a member; and he has since adopted the same method in more instances than one, with equal success. The preceding case might by some be considered as one of sympathetic, or "mock" epilepsy. The next is one, treated also by counter-irritation, which admits of no cavil, as to its being or not a case of "true" epilepsy.

CASE XXIV.

True Epilepsy.

A young mason fell from a lofty scaffold, on his back, and was picked up senseless. He was carried to the *Hôpital de la Pitié*, and placed under the care of the celebrated Serres, than whom no living physician is a better authority in maladies of the nervous system. After a long and tedious treatment, the poor fellow so far recovered his general health as to be able to leave the hospital, and return to a moderate exercise of his art. At the expiration of a few months, however, genuine epileptic paroxysms came on, and he again was forced to seek relief within the walls of the same hospital. The views of Esquirol, as to the condition of the spinal marrow in epilepsy, had just then been made known, and in some examples of that disease, observed also by Serres, and others, those views had been confirmed. In lieu therefore of wasting time in the trial of numberless medicaments and nostrums for the cure of it, a local depletion of the vessels was ordered in the first instance, and was repeated from time to time, affording relief, but making little impression on the number of paroxysms. At length a cerate was prepared, made by mixing caustic ammonia with purified butter of cacao, which being spread on linen, was applied over and along the spine. By this means the part became blistered in a short time, and was brought into a state of active surface-discharge, through which the paroxysms of epilepsy became less frequent, and less important, until they at last ceased entirely. This case also occurred during my visit to the Parisian hospitals, in 1816 and 1817; and in a series of letters at that time sent by me to the London Medical Repository, on the state of medical science in Paris, I announced the composition of the ammoniated cerate or counter-irritant here mentioned, as a substitute for a common blister.

CASE XXV.

Protracted case of Sympathetic Epilepsy completely cured at last by Sulphate of Zinc taken internally, and by external Counter-irritation.

The subject of this case, a lady, began to manifest symptoms of an epileptic character at the early and critical age of fourteen years. At first these symptoms were not heeded much, though means were suggested to prevent their recurrence, and to shorten their duration whenever an attack came on. None of the many plans, however, adopted, either in England or abroad, seemed to produce the smallest permanent good effect in staying the progress of the disease, which, on the contrary, growing with its growth as it were, became more and more importunate and distressing as the young lady advanced in years. As there could be no doubt of the nature of the complaint, and the source to which it was to be ascribed, every measure was adopted to counteract the evil tendency of the latter, and so to render it at least perfectly harmless. In all this we succeeded but imperfectly. The attacks were at times so capriciously frequent, and at others so unaccountably apart, that no relation could be established between the curative means employed and their result, with the view of forming a correct opinion as to any success already obtained or hereafter to be expected. The attacks came on at night during sleep, as well as in the daytime; and the patient would, on their first coming on, invariably fall to the ground, if she was standing at the time and alone,—a circumstance of a very rare occurrence indeed, owing to the unceasing and solicitous care bestowed by two most affectionate parents upon their amiable daughter. Years rolled on in this manner, and the lady grew to womanhood, without being able to produce herself into society, owing to the incessant apprehension of an attack occurring in public. Having had the constant management of the case from the first, and having declared my deliberate opinion respecting its final issue, to which I steadily adhered,—I never allowed myself to swerve from the line of practice to be pursued. At the same time, great allowance and deference being due to the anxiety and painful impatience of parents, I took care never to stand in the way of any new and safe trial of remedies which were proposed by others, whether professional or domestic; and our patient went through not a few of them in the course of some years, without any material benefit.

It was at last determined to place her under the persevering action of those remedial agents on which I had from the first stated that I would rely, and could venture to promise a cure; and it is scarcely necessary after this to add, that counter-irritation was one of those agents. This was obtained by means of the ammoniated lotion used at the vesicating degree of strength on the vertebral column—an application which soon afforded ground for rejoicing that it had been resorted to. Along with it an occasional energetic evacuant (not composed of mercury—for that drug had been em-

ployed before, *ad nauseam*, by others to no purpose), and small doses of sulphate of zinc, in pills, daily repeated, were conjoined. Through all these means the disease was at last conquered; and the lady has for the last three years returned to her station in the world, *perfectly well*, in bodily as well as intellectual health,—the knowledge of her former harassing malady, of fourteen years' duration, having all that time been confined to about half a dozen individuals in the family.

CASE XXVI.

Another example of Sympathetic Epilepsy from a cause different from the preceding—shortly cured by Counter-irritation.

Mrs. —, the lady of a wealthy banker, whom I had had occasion to attend between the years 1822 and 1830, in several of her confinements, was during the first months of pregnancy subject to paroxysms of epilepsy,—the attacks coming on soon, if not immediately, after the beginning of gestation, and continuing more or less twice and sometimes three times a month, until after the period of quickening. The remainder of the nine months was generally passed in tranquillity and perfect health; nor was there any thing particular at the time of the confinement itself. During the first and second pregnancies, every species of remedy that could be thought of had been resorted to, in hopes of stopping this strange affection, which in every respect resembled epilepsy. The profession know that such a form of nervous affection is by no means singular, though of rare occurrence, in females who are placed in the same delicate situation. Bleeding from the arm produced no effect. Cupping near the region of the spinal column made no impression. Ordinary blistering was suggested, and adopted during one or two paroxysms; but the tedious, troublesome, and painful nature of the remedy, which after all was too slow in arresting the attack when on, and inefficient in preventing the next attack, induced the patient to resist all further application of it. Still it was deemed likely that counter-irritation on some part of the spine, if it could but be produced rapidly, indeed instantaneously, while the paroxysm was in action, might tend to check it. On one occasion, that the epileptic attack, accompanied by more than usually severe convulsions, foaming at the mouth, rigidity of the limbs, and other symptoms, seemed to threaten some serious consequences, I prescribed an extemporaneous liniment, composed of essential oil of thyme (*oleum origani*), tincture of cantharides, and soap liniment; which being rubbed up and down the spine (the patient lying on her side on the bed) seemed in the course of a quarter of an hour to produce a rally. But altogether the result was not as satisfactory as could be wished, and therefore all further attempts at interfering with the nervous symptom, either during that or any other subsequent pregnancy, was abandoned. In the year 1830, however, on the occasion of my attending Mrs. — for the last time as an

accoucheur, finding her again under the visitation of her strange malady during the early period of her pregnancy, and having then the power of the ammoniated counter-irritating lotion at my command, I prevailed on the patient to allow me to try that application in her case. A compress strongly saturated with that preparation was accordingly placed on the lumbar region, and pressed down for five minutes, while the convulsive motion of the limbs, the foaming at the mouth, the gnashing of the teeth, and apparent unconsciousness were going on. At the expiration of that time all these symptoms had ceased, and Mrs. — again got on her feet in less than a quarter of an hour, without either of those feelings of lassitude and general soreness of the body, or the intense headache, which used invariably to follow the ordinary paroxysms after going through their natural period of duration of seldom less than an hour, and, at times, more. No blister followed the application. The same result was obtained at each succeeding attack of the disease, the number of which was not diminished materially by the external application, but their duration always; thereby showing the superiority of the remedy in question to any other employed in affording instantaneous relief. It is worthy of remark that the mother and grandmother of this lady had been (as my patient assured me) subject to the same temporary nervous affection, when placed under similar circumstances.

CASE XXVII.

Genuine Epilepsy from disease in the Spinal Nerves, affecting respiration between the attacks.

In the absence of Sir Henry Hallford, I was summoned, on Monday, May 25, 1835, to Lady —, in the vicinity of St. James's square, who had been for two years and a half under the care of that physician, with a complication of serious symptoms, principally of a nervous character. Her ladyship, for many years previously to the last mentioned period, had been my patient, and occasionally also of the late Dr. Baillie, whom I was in the habit of calling in consultation on every emergency. We were both aware of the liability of our patient to epileptic attacks, although these were of rare occurrence; and at a somewhat later period, not only was an opinion to that effect given in writing, with directions to the patient how to manage the case when she was absent, but with that opinion was also coupled a declaration of our apprehension that the upper portion of the spine was affected, and might become still more seriously so as she advanced in life. During the many occasions in which I had to attend Lady — for other complaints, the views above alluded to were never lost sight of, and the treatment was always so managed as to be in accordance with them, no matter what the nature of the complaint might be, for which medical assistance was required.

At the time mentioned in the introduction of this case, Lady — had, as I before stated, been confined nearly three years, chiefly in the recumbent posture, scarcely able to stand, or use her limbs, and was on more than one occasion said to have been in the most imminent danger. Sir Henry Halford was the regular attendant during that period, but the uncertainty of his attendance, owing to his professional avocations at court, left it open for any other medical man to be called in.¹ Why my services were again sought after an interval of three years, and after they had been dispensed with without any better reason than there was for calling them again into action on the present occasion, I have never been able to discover; nor is it much to the purpose to enquire. Probably the knowledge which had by this time spread wide in the higher circles, of the success obtained in the Case XVIII., induced her ladyship to try how far the same plan might succeed with her; for in the state to which she was reduced, spasmodic, or convulsive attacks in the spine, as I found afterwards, were of frequent occurrence. The description of the complaint supplied by her ladyship at my first visit, was that she had acute and intense spasms in the chest, which she felt to begin between the shoulders, and high up in the neck, pass through her heart (as she expressed it), stop her breathing, and produce a sharp pain in the breast-bone. She added, that she often experienced such feelings, but never so severely as during and after an attack of *spasm* (her ladyship would never admit the existence of epilepsy), one of which she had had the day before, when she was induced to request my attendance. Although solicited to do so, I declined using any counter-irritating application until I was satisfied of the real character of the attacks. I prescribed what medicine appeared to me to be proper, and called for by the symptoms present, and postponed the employment of any counter-irritant to a future period.

Between the 26th of May and the 1st of June, nothing material occurred; but on the evening of the latter day, at about seven

¹ From a professional letter I received about this time, addressed to me at the request of the patient, by her medical attendant in the country, I culled the following corroboration of my views: "As early as the summer of the year 1831, upon an examination of the spine, I found evidence of the existence of considerable preternatural sensibility, extending from the beginning of the cervical, to about the middle of the dorsal vertebræ. For this morbid condition of the spinal nerves, in addition to the most perfect quiet in the recumbent posture, her ladyship submitted to a trial of long-continued counter-irritation, in the form of blisters, moxa, and subsequently to the severer remedy of a seton in the neck, without much apparent benefit," 30th May, 1835. The seton was no longer in existence at the time of my visit, and it is perhaps to be regretted that it was not so. Such forms of counter-irritation do not positively cure epileptic disorders, but who can say that as long as they are in action they do not tend to keep such disorders in check, and ward off danger? My experience goes to the affirmative of that question; but in the present case the patient herself, probably got tired of an irksome remedy, which did not produce every thing that was expected from it.

o'clock, I was hastily sent for, in consequence of a return of one of her attacks, at the conclusion of which I arrived in — square. The patient had just recovered, and complained of severe pain at the nape of the neck, as well as in the back-bone between the shoulders, which was increased by taking a deep inspiration; and produced, what was indeed very manifest, a species of spasmodic breathing quite painful to witness. The pulse was very feeble, quick, and quivering. The countenance was pale and tired; the lips livid, the back chilly, and every other part of the system deranged; as we usually find in cases of spasmodic complaints after a violent attack. Having added half an ounce of the strongest pure liquid ammonia to an eight-ounce phial of the usual ammoniated counter-irritant, I applied this mixed liquid for a few minutes, first to the spine, and between the shoulders, and next, for three or four minutes also, to the region of the heart. The effect on the pain in the chest and back, and also on the breathing, was almost miraculous. Before I left the room the patient could breathe quite freely, and no longer experienced any pain whatever.

On the 3d of June I was again hastily summoned to my patient, who was now actually under the writhing agony of an attack, so nearly allied to epilepsy, that I should not be able to comprehend any medical man who should feel disposed to view the attack differently. It was on this occasion I learned from the lady's attendant, and from friends, as well as from a sister of the patient, a lady of the very first rank in society, that the attack I was then witnessing was nothing different from those she had been having for the two or three years previously, and which no medicine had been able to relieve. The strongest ammoniated lotion was again immediately applied by myself, to the back and region of the heart, simultaneously pressing the chest between the two applications, for a few minutes, by the watch, at the end of which time the paroxysms terminated. Thus, in two instances, the new counter-irritant, the like of which had never been employed before in Lady —'s case, had been the means of considerably curtailing the duration of her dreadful bodily sufferings.

But what relieves yet does not completely cure, seldom affords sufficient satisfaction to the patient; and accordingly in this case, after a few more visits, and a consultation with Sir Henry, it was suggested by that physician that the patient should be, for the present, left to his own occasional visits, and the usual succession of medicines, without any further active interference. The suggestion was a proper and a reasonable one, and I acceded to it. The sequel of the case, as I afterwards learned, proved the correctness of the view I had taken of its severity and incurability; at the same time that it confirmed the truth of the opinion given thirteen years before, by Dr. Baillie and myself, of the nature of the complaint. Her ladyship died a few months after she left London for the family seat, and a posthumous examination showed the extent of the disease in the medulla oblongata and spinal cord.

6. SPASMODIC OR CONVULSIVE ASTHMA AND HAY-FEVER.

If the reader should have an opportunity of looking into that clever and industrious compilation of every thing that is or has been known in medicine, called "Dr. Copland's Dictionary of Practical Medicine," and will refer to his article "Asthma," he will there find that there are a great many varieties of that oppressive disease of the respiratory organs,—among which one is emphatically styled the *convulsive* or *spasmodic* asthma; for this reason, that the tubes in the lungs, through which the air is to be inspired and expired, are unnaturally constricted, or in other words their diameter is diminished, and this by a spasmodic action of a recurrent character, which gives to the general act of respiration the appearance of convulsion pervading the whole region of the chest or thorax. Such a complaint is at times accompanied by positive pain; at others not so, but mere oppression, anhelation, or difficulty of breathing, forms the whole extent of the inconvenience. Under any circumstance, an attack of spasmodic asthma is painful and distressing to witness, but doubly so when we are told that the patient is suffering acute bodily pain at the same time, in some part of the chest. Nor is it rendered less distressing by the consideration that, in severe cases of the complaint, when the attacks are both frequent and of long duration, the retention of blood in the head, to which they give rise, predisposes the patient to apoplexy. It is to be understood that I speak here of such spasmodic asthma only as is clearly not the effect of sympathetic action, from the presence of a disease in the heart; for in such a case no relief is to be expected of a permanent nature. I need not enter further into the symptoms of spasmodic asthma; as the document with which I introduce the first case of this disease, which was relieved by artificial counter-irritation, sufficiently explains its character in the words of the patient himself.

HAY-FEVER, of late years so much noticed in this country, is likewise a variety of asthma, accompanying a peculiar endemic catarrh of the head and throat, in which there is spasm and constriction of the air-vessels, but without positive pain, and with no appearance of convulsion. This disease, which prevails only at particular seasons of the year, and in certain peculiar localities, is a rebellious one, like the spasmodic asthma, but both will yield to the action of ammoniated counter-irritating applications,—as the following cases will prove.

CASE XXVIII.

Spasmodic Asthma complicated with Apoplexy.

On the 14th of April, 1835, the lady of a general officer, occupying a high station in the administration of the army, addressed me the following note:—"I desired a young friend of mine, the eldest

son of Mr. —, of Yorkshire, to consult you for what appears to me to be a desperate case, as it seems that none of his previous medical advisers have done him good. It would indeed be a great consolation to us all, if in such a complicated case as his of asthma and apoplexy (for so I understand it to be) you could strike out something to prolong a life very precious to his family.”—On the following day I was requested to attend the gentleman himself, at one of the hotels in my neighbourhood. I found a tall, well-made, good-looking young man, aged twenty-nine years, apparently of robust constitution, labouring under an attack of spasmodic asthma, which ceased almost immediately after my entering the room. His father and brother were present. I examined the chest minutely, and could only detect the usual whizzing and somewhat puerile sound which accompanies respiration in such cases. The movements of the heart were unequal, but the heart itself seemed in a normal state. As a residence in the atmosphere of London invariably aggravated the disease, it was decided that he should begin at once, under my direction, to take the prussic acid, which (as stated in my publication on that remedial agent when I first introduced it into the practice of medicine in this country nineteen years ago) I hold to be a most valuable remedy in cases of asthma; and that as soon as another attack supervened, I should be sent for, with a view to apply immediately a counter-irritant to the chest. In the mean time I requested to be favoured with a written history of the case for my consideration, as I had not then time to listen to the particulars of it, nor would it have been judicious to have induced the patient to hold a long conversation.

I shall only give, in this place, the principal facts of the case, taken from that statement, which is a long one. At the early age of seven years, being then in the enjoyment of excellent health, after a long day's journey, and a great fit of childish passion in the morning, Mr. — was suddenly attacked in the night with a choking sensation and dread of being smothered, which made it necessary for a medical man to sit up the whole night, during which there was constant convulsion present. Attacks like these became more and more frequent, and, while they lasted, great irritability of temper, bordering on violence, invariably prevailed. The difficulty of respiration, amounting to a dread of suffocation, came on gradually, and soon became a never-failing attendant of these attacks. Such was the tendency of the system to this complaint, that in the progress of years, whether pursuing the usual course of education, or afterwards enjoying the amusements of social life proper at a maturer age, on the slightest emotion, or sudden alarm, or bodily exertion, paroxysms of the disease would come on. The patient has scarcely ever been able, since the first attack, to go a journey of any length in a carriage, without having the asthma on the night following. In all the attacks it was found that if the patient could go to sleep, the distress and spasm of the lungs ceased, and he awoke better, although the difficulty of breathing often returned

unless he slept again. The earliest remedy tried, and followed by benefit, was an emetic, of which he took several; and the most recent remedy recommended, which he has unfortunately had occasion to repeat too often, is a glass of brandy. During the prevalence of the severest attacks, when pain of a very acute description prevails in the centre of the chest, and the gasping for breath is most awful, half a small tumbler of pure brandy, swallowed at once, will stop the paroxysm; and that quantity of spirits, which, under ordinary circumstances, would certainly intoxicate him, seems then scarcely to warm his stomach. So nervous is the patient become, and now and then so low spirited, that he can at any time induce a fit of asthma by merely thinking of it.—Medical men have for the most part treated his complaint as arising from the stomach, and have prescribed every possible species of medicine for it, all of which he took most rigidly, but without the slightest benefit. During a course of mercury the asthmatic paroxysms were considerably diminished in number. Dr. Jephson, of Leamington, ordered the inhaling of some medicated vapours, and advised rubbing the chest with a yellowish ointment, but neither of these experiments were of use. Morison's pills, and quantities of other quack medicines, were had recourse to, when the remedies of the faculty proved ineffectual; but equally without effect. At uncertain periods all asthmatic symptoms would for some time subside entirely, and the patient remain perfectly well. In one of these intervals, a short time before I was consulted, Mr. — had an attack of blood in the head while riding out, fell from his horse, and was picked up in a state of insensibility and convulsion, which lasted for a period of twenty-four hours. On that occasion he was bled, and had proper remedies given him. In the summer before, an attack somewhat similar, though much slighter, had seized him after a violent fit of coughing. Lastly, it is admitted that in general a great deal of wine had been drunk, and that until lately, when those remedies seemed to have become less efficacious, laudanum and morphine had been the most successful agents in keeping off the paroxysms of asthma.

Such are the outlines of this interesting case, and I wish I could add that they presented a sufficient ground for the hope of a recovery. But the complication of an apoplectic tendency with the asthma rendered such a consummation nearly impracticable. On the very next day to that on which I had first seen the patient, he was seized simultaneously with spasm in the chest, wheezing asthma, and congestion of blood in the head, which rendered him insensible, and placed him in great danger. Under these circumstances I ordered a free depletion of the blood-vessels, and applied the ammoniated counter-irritant to the chest, as well as to the upper part of the spine. He was not long in recovering his senses, and in losing his asthmatic symptoms, under the joint effect of the means employed; and we had reason to congratulate ourselves that we had such means at command, considering the imminent danger in which the

patient was placed. After this attack Mr. — continued free from all complaint for some days, during which he was able to go out during several hours of the day, and attended to his affairs without inconvenience. But as it was desirable that he should not remain longer than it was absolutely necessary in London, and as no cheering expectations were held out to him beyond that of a present temporary relief, by the occasional employment of the ammoniated lotion (his more perfect recovery from the pectoral disease requiring the protracted use of the prussic acid taken internally), he soon returned into Yorkshire, from whence he addressed me a letter after a few days, stating that he was much better.

CASE XXIX.

Spasmodic Asthma, assuming the garb of Hay-fever.

Lady Emeline — requested my attendance at the residence of her father, not far from my house, on the 16th of June, 1835, in consequence of having been suddenly seized, at two o'clock, on the night of the 14th, with an oppressive stridulous and spasmodic asthma. About three years before her ladyship had suffered from a similar complaint, which came on not long after her marriage, and lasted four months. While she remained in this country, no medical treatment seemed to do her any good. The disease accompanied her into Italy, where she was sent in hopes of a recovery, and where she gradually lost her asthma. For more than three years and a half after that period, up to the present, no attack of the same kind had been experienced. The attack under which her ladyship was now labouring had lasted four days, and she had passed three dreadful nights. It was accompanied by fever, dry lips, and burning eyes. As the paroxysms of the disease always occurred at night-time, towards two o'clock, and as her ladyship usually slept at a villa belonging to her father-in-law, four miles from London, I was requested to pass the night there, in order to be able to judge more correctly of the nature of the disease. On that occasion I witnessed two successive wheezing paroxysms, accompanied by pain in the muscles of the chest. A draught, containing three minims of prussic acid, was administered immediately, and an ammoniated counter-irritating lotion was applied to the spine, between the shoulders, by which the pain was quickly removed, and the respiration became generally relieved in a much shorter time than during any previous seizure of the sort. For three successive nights I watched the case in a similar manner,—the Hon. Mr. —, the lady's husband, undertaking to apprise me if any attack came on; but the three nights were passed without any seizure, and I discontinued that species of attendance.

For the purpose of the present work I need not enter into the particulars of the more general plan of treatment, and of the means adopted to ascertain the true nature and extent of the complaint,—which, whether we consider the season of the year, or the manner of

its seizure, resembled much what has been called *hay-fever*. My object in this place is to show that the counter-irritant answered our expectation in the present case, as it had on many previous occasions. It is sufficient to say that Lady Emeline was not long in shaking off her complaint, and in recovering that tranquil state of health which enabled her soon to add another flower to the poetical wreath she has intertwined around her fair name, much to the credit of the female aristocracy of this country.

CASE XXX.

Stridulous and convulsive respiration, accompanied by pain, during an attack of pulmonic disease.

Madame —, a foreign lady, aged forty-five years, residing in the family of a distinguished naval officer, of a high rank, connected with the court, was attacked in the month of April, 1835, with what has been termed *peripneumonia notha*, or bastard inflammation of the lungs. For a few days previously she had suffered from rheumatic pains in various parts of the body, in consequence, as was supposed, of checked perspiration, caused by exposure to a draught, while waiting during a sudden shower, under a porch, for a carriage, after a long walk in warm weather. The difficulty of breathing was so great, and the pain in the chest, though obscure, was said to be so distressing, that bleeding had been had recourse to before I saw the patient. Although the general symptoms of the attack seemed somewhat alleviated by the measures adopted antecedent to my visit, I still found the patient hardly able to take in a moderate inspiration without being stopped by an expression of sudden pain, and by cough without expectoration. The lips were livid, and the forehead was bedewed with cold moisture. I sounded the chest to ascertain whether any effusion of serum had taken place, and satisfied myself that such was not the case. As to the pulse; no great assistance could be derived from it in forming a sound opinion; for it beat at all rates, and from the most wiry, up to the most thumping tone of vibration, in the course of two or three minutes. What appeared to produce a greater degree of anguish to Madame —, in this state, was the excessive oppression she felt in the chest generally, coupled with a very short, and almost spasmodic respiration. It should be remarked that the blood abstracted exhibited no signs of inflammation.

There could not have been a more favourable case for the employment of an instantaneous counter-irritant than this. Every medical man would have deemed a blister, under such circumstances, the very ideal of a remedy of the moment, and would have looked to its beneficial effect, produced in six or seven hours, for a favourable solution of the painful state of the chest. I thought and felt just so; but being desirous of obtaining such a result in the shortest period of time possible, and knowing that I had it in my power to effect that purpose by means of an ammoniated counter-irritating lotion, I

directed it to be applied to the chest, of a sufficient strength to produce vesication. This was obtained in a little more time than seven minutes, when a most copious discharge of serum took place, from an accidental rupture of the cuticle, and the oppression, as well as the pain in the chest, disappeared. The recovery after that went on its regular course. This case strongly marks the great advantage of being able to produce an instantaneous blister.

CASE XXXI.

Spasmodic seizure at the chest, similar to the preceding, during an attack of influenza.

Lieutenant H—, of the — regiment of foot, about a year before he entered the army (1836) and while still residing in his father's house, was labouring under a severe attack of influenza, accompanied by fever, which at one time ran very high. He had been confined to his bed a few days, when suddenly one night he woke with a tremendous and overpowering weight upon his chest, gasping for breath, and endeavouring to call out for assistance. His mother, who had been watching in the adjoining room, was at his bedside in an instant; and finding him in the state just described, and learning from him that he was also then suffering from great pain under the breast-bone, she proposed to apply a compress over the chest, with an ammoniated lotion, which I had directed the previous day should be in readiness in case of a blister being required. This precaution had been rendered necessary, not only on account of what might be expected in a complaint of this kind, but also because the patient lived at the distance of two miles from London, and could not get immediate medical assistance if necessary. A compress, quite saturated with the liquid, was accordingly applied; and I learned the next day, from the mother of the patient, that the effect in relieving the oppressive symptoms was almost magical—so much so, that when she offered to remove the application after ten minutes, the patient, who had expressed in that time great delight at the sensations produced by it, requested it might be suffered to remain on until the compress was quite dry. He very soon afterwards recovered from the influenza, in a most satisfactory manner.

7.—TETANIC AFFECTIONS.—*Trismus*.—LOCKED JAW.

Under this head I have only one example of disease to offer, which has given way to the employment of an ammoniated instantaneous counter-irritant. But the case, though it be a solitary one (and I of course attach no more importance to it than ought to be attached to a single case), will be considered as one full of interest, if, as I believe it will do, it should lead to a more immediate and successful practice in the treatment of that dreadful affection, the "locked jaw."

I shall simply premise, for the information of such of my readers as are not conversant with the nature and danger of tetanic diseases,—which are most frequently the result of punctures or some other slight injury of the nerves, principally of the extremities,—that the proof of their acknowledged intractability is to be found in the multifarious lists of remedies that have been recommended and adopted, and again changed for others, in their treatment, especially as regards the locked jaw. To this very day the different nations of Europe, the most civilised even, are not agreed as to the best medicine for the cure of the latter complaint; and if we except another highly nervous disorder somewhat analogous to it, namely, *hydrophobia*, there is scarcely another disease respecting which medical men are less agreed in point of practice. Nor is their opinion of its nature and locality in the human organisation more settled; inasmuch as, in the greater number of instances of the disease, nothing particular has been discovered after death, either in the brain or any other organ. It is only in considering locked jaw as a disease of great danger, particularly in hot climates, or during summer in this country, that there is no difference of opinion among professional people. Under these circumstances it will be admitted, I trust, that, in the case about to be related, I was perfectly justified in trying, for the first time, the experiment hereafter detailed, for the cure of a severe attack of locked jaw; instead of floundering about in the dark, making successive trials with manifold remedies, the virtue of which was at best problematical.

CASE XXXII.

Locked jaw supervening after the infliction of a slight injury in the thumb.

Count M——, nephew to one of the Italian ministers at the Court of St. James's, and Secretary of Legation, residing in South Audley-street, while strapping his razor on the 16th of June, 1835, slightly wounded the ball of the left thumb, grazing the skin only, and causing a puncture rather than a cut, with the upper angle of the instrument, so minute, indeed, that with difficulty could the place be discerned. This occurred at about nine o'clock in the morning, and the Count paid no attention to the circumstance. At one o'clock P. M. pain manifested itself in the left hand and arm, which was not long in reaching the shoulder. It likewise descended along the left side of the body to the lower extremity, as far as the hollow, behind the knee. The patient, without being alarmed at this, mentioned it to a friend, then Envoy from the same foreign court to that of the Netherlands, at that time on leave in this country, who immediately started in search of me, and requested my professional attendance. Having heard all the particulars of the case, and examined the thumb, as well as the arm, without discovering any thing, or producing more pain by the pressure of my fingers in the direction of the nerves than already existed in the parts, I proceeded at once to the application of compresses,

with the antidynous lotion, to the wrist, the bend of the arm, the axilla, and the hollow of the knee. In all these points the pain was acute, but on the lotion being applied, and producing its usual burning sensation, the original pain subsided, or was not sensibly felt. Having thus far succeeded in obtaining relief, and finding the patient faint, pale, and dejected, with a feeble pulse, I ordered some strongly-stimulating pills, one to be taken every two hours till bedtime. In the evening I visited him at the embassy. He was then feverish, had found it difficult to keep down his dinner, and complained of weight in the back of the head and nape of the neck. A smart aperient was prescribed, to produce its effect in the morning.

On the 17th of June (the second day) the medicine ordered having had a proper result, it was remarked that the count did not seem to care for his breakfast. He had passed a night somewhat agitated, and rose with an intense headache, and some difficulty in swallowing the saliva. The countenance appeared very distressed; the muscles of the limbs of the left side felt more rigid than on the previous day, and those of the abdomen seemed sore to the touch, as well as somewhat contracted. I confess that at this conjuncture the possibility of a tetanic disease being about to develop itself, probably on the following day, flashed across my mind. The weather was unusually sultry, and my experience in the West Indies, while serving as a naval surgeon on that station in 1810, suggested to me the likelihood of an attack of locked jaw occurring on the third day from the accident—that being, generally, the period of the appearance of the disease, after either punctured or lacerated wounds of the extremities; except in very severe cases, when the locked jaw is almost immediate. This suspicion I deemed it my duty to communicate to the minister, who, after reflecting on the case, sent me a note, of which the following is a translation: “Wednesday, 17th of June, 2 P. M. I feel very uneasy since your report of the state of my nephew; and as he is entirely intrusted to me, I think that I ought to do for him even more than his own parents would do were they here. What should you say to a consultation with some surgeon of high reputation—your friend Mr. Earle for example? If you think that he ought to be sent for, pray let me know at what hour you could meet him.”

Had the case been one enveloped in obscurity; one in which *surgical* anatomy is more useful than the anatomical knowledge of a physician; or one, in fine, for which I could have expected that any surgeon or other medical practitioner might possess better means of cure than were universally known,—I should not have considered the apprehension I experienced, of exciting alarm in the mind of the patient (with whose natural nervousness I was well acquainted) by a consultation, as of sufficient weight to deter me from having recourse to one. But the contrary was the case; and for such reasons I declined giving a positive answer, leaving it to the uncle to determine that point. In the mean while I kept up a constant counter-irritation, particularly on the thumb and wrist,

which were blistered by the applications and smarted considerably; while the internal pain was nearly altogether subdued. I scarcely need remark that the patient was visited several times in the day.

On the third day, Thursday, the 18th of June, every thing at my first visit seemed to promise well. The internal remedies prescribed, principally of the antispasmodic class, with alkalies and quinine, in the form of pills, had apparently induced an improved state of health, and the patient appeared in better spirits. Still the countenance denoted some inward distress, which seemed little in accordance with the patient's declaration, that he felt no pain at the time, and which, coupled with a sort of impediment that I fancied I detected in his speech, led me to give a very cautious opinion to the friends, as to what might yet happen. I remained some time with the patient, studying his symptoms further; as, independently of the natural interest I felt for him and his relations, the malady with which he was threatened, and to combat which I had begun and was prepared to follow up a plan somewhat new in practice, became an object of intense interest to myself. I had been in the room perhaps half an hour, when the left shoulder, the muscles of the throat, and those of the chest, of the same side, became rigid, as well as painful, the teeth chattered, a general rigour came on, with a strange rolling of the eyes, and the patient was presently convulsed, yet in the full possession of his senses. While a glass of hot brandy-and-water was preparing for him of sufficient strength, I applied the counter-irritating ammoniated embrocation to the shoulder and upper part of the spine for some minutes. This, and the hot stimulant, swallowed simultaneously, quelled the storm, and the patient expressed himself free from uneasiness, though he at the same time felt sore all over, and inclined to doze. In this state I left him, to attend to my other professional avocations of the day. While engaged in these, a special messenger sought me at another of my patient's, and placed in my hand the following note, written in Italian, by Count —, the patient's friend, of which this is a translation:¹

Thursday, half-after one o'clock.

"Dear Doctor,—A quarter of an hour after you left Count M—, he had a fresh and a most violent attack, accompanied by a new symptom, which has alarmed us all considerably—the rigidity of the lower jaw. Count D'—, the minister, who was present, feels extremely uneasy, and I am truly frightened. Pray do me the favour to come as soon as possible, to remedy, if in your power, the present mischief, and arrange as to what should be done hereafter.

"Yours truly, P—."

¹ The reader I trust will excuse this apparent prolixity of details; but the case and its result are too important to be despatched briefly; and moreover, it will be borne in mind that I do not wish to instruct my professional brethren, who have nothing to learn from me on this (or indeed any other) subject, but for the generality of readers, who must be fully informed of the facts, in order that they may understand the question.

On my arrival, the scene that presented itself was truly distressing. The patient seemed convulsed, more or less, generally, and his eyes rolled and stared; he could not utter a word, but emitted the noisy sounds of a dumb person, while the lower jaw was fixed, leaving the mouth somewhat open, so as to give to the countenance a frightful appearance. In this state it had been for nearly two hours. The upper and lower limbs were rigid, and so were the muscles of the throat and nape of the neck, though the latter was still moveable. A very small tea-spoonful of water was introduced into the mouth, but it dribbled out again. On being questioned if he was in pain, he made an affirmative sign. I instantly drenched two white pocket-handkerchiefs, folded up in the ordinary manner, with some of the strongest ammoniated antidynous embrocation, and covered with them the whole jaw and cheek, from the back part to the front of it, on both sides; while a third compress was placed very high up on the spine. Pressure was made on all with perseverance, when in a few minutes we had the satisfaction of seeing the jaw drop, and afterwards close by the spontaneous act of the patient. By the time the compresses were removed, the whole surface was enveloped in a secreting vesication.

This was the true end of the disease. No serious attack ever took place again; and although threatenings of it, either real or in the mere imagination of the affrighted young man, were frequent in the course of the three or four next days, they never reached any serious result. At the end of that time I recommended him to pass a few days at Richmond; on returning from which place he came to me, to report himself quite well. Nevertheless, from time to time, Count M—— experienced twitchings of pain in the original place in the thumb, and along the arm, which he invariably attacked by a small compress charged with the lotion.

This case was noticed in the diplomatic circles, and came to the knowledge of his late majesty, who was pleased to enquire into the particulars of it, as well as of the treatment, from Count D'——, the foreign minister alluded to, expressing at the same time a great interest in the case, as he witnessed many fatal instances of the disease in the West Indies. The uncle of the patient, as well as his friend, are yet in London; the latter having since been appointed to the official situation of the former. The patient himself has changed the English for another foreign mission, and is in the enjoyment of excellent health.

8. NERVOUS HEADACHES.

Who has not suffered at some period or other of his life from nervous headache? Can there be, of the minor ailments that afflict mankind, a more worrying and disabling indisposition? It is one for which the sufferer scarcely obtains even pity; one to which physicians seldom condescend to pay any attention, except as it may constitute a symptom of some other serious disease; one,

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in fine, for the removal of which either a thousand remedies are propounded by officious acquaintances (as in the case of toothache), which are good for nought, or else none is recommended except patience. The main reason of all this is, that a nervous headache generally ends of itself in the course of twenty-four hours, including a night, during which most of the sufferers from it contrive to sleep over their pain; and that, therefore, unless a something be found to shorten very considerably even that limited measure of suffering, it is never likely that the majority of patients will submit to a regular succession of pills, and draughts, and drugs innumerable, however skilfully prescribed, for the removal of that which "to-morrow" will cure without them. I think one may venture to assert, that what are called "genuine nervous headaches" are as much the opprobrium of the medical art as gout is, or any other disease not yet sufficiently mastered by physicians; and that the man who shall establish on good evidence a claim to having shortened the duration of these headaches, by some simple and not injurious method, will deserve and obtain the thanks of the community. That many attempts have been made, from time to time, to accomplish so desirable an object, is a fact which the history of medicine vouches for, and which the domestic history of almost every family can assert. But have those attempts been of avail to the sufferers? If they had, we should not every day hear of the many persons of both sexes who suffer under that complaint. What is wished for, in the case of such headaches as are here referred to, is as easy and as ready a method of removing them as the dentist possesses, who, with the tooth, snatches the toothache also away. His cure is as rapid as it is effectual. Might not we hope to be equally rapid and effectual in the cure of nervous headaches, although there be nothing tangible to remove in their case?

We may find a tolerably presumptive proof that nervous headaches are generally prevalent, in the readiness with which every body seems to know what is meant by that term. It would, indeed, be impossible to define them very distinctly, even were it necessary to do so for the information of the reader; for a nervous headache may exist alone, and be its own creator; or it may be the consequence of another disease, through sympathy or continuity; or it may be allied to and mixed up with a bilious headache—another of the cephalic family of complaints well known to the vulgar. Well, then, how is it possible to state in plain language the way to discriminate between the one and the other, except by saying that a nervous headache is that which is neither a bilious headache, nor one arising from fulness of blood in the head?

Such a headache, then, if the reader can comprehend my meaning, is that which, by means of an instantaneous counter-irritant, I proposed to myself to disperse, as quickly as I have shown it possible to do in disorders of the nerves of a spasmodic character. Indeed, it may be asserted with confidence, that of the whole range of disorders mastered by the strong ammoniated combinations exter-

nally applied, none has shown itself more obedient to this agency than what is termed a nervous headache. I might in fact state freely, as well as truly, that if the beneficent action of ammoniated counter-irritants had not been forcibly and sufficiently pointed out in the cases of serious nervous disorders already enumerated, the result of my experience with those agents in the cure, or more properly speaking, in the *dispersion*, of nervous headaches, would alone warrant the conclusion that they are endowed with a power which no other external application possesses. But the most marvellous part of their history, in reference to the complaint under consideration, is the almost instantaneous mode in which they cure that complaint. It is not very unusual for me to see, among such patients as attend me in the morning at my house, labouring under a paroxysm of nervous headache, however acute, three out of four of them leave my study perfectly free from the disease, after a single application of an ammoniated counter-irritant, either to the temple or temples, the forehead, the nape of the neck, or behind the ears, according as the case may require. To this we must add the facility with which the patients themselves, who happen to be periodically subject to such a disorder, can apply the remedy, and immediately obtain relief, after one or two applications made by the medical practitioner in the first instance; so that all further attendance from him may be dispensed with.

These several assertions I shall proceed to substantiate by examples of nervous headache cured in the manner alluded to; and I shall only vary so far from the plan I have hitherto pursued, in narrating the medical cases in this volume, that I shall not give the cases in detail—inasmuch as the nature of the complaint admits of none; it being often as sudden in its coming on, as it is brief in duration.

CASE XXXIII.

A noble earl, not more conspicuous for his station in society—which he has, through a long career, enhanced by great public and private worth—than proverbially known for being at one time the victim of the severest form of nervous headache, has, on three or four different occasions within the last twenty years, been under my care for that complaint. No doubt existed in his case that the origin of the headache was to be found in a deranged state of the digestive organs, and the treatment therefore had invariably been directed to restore those organs to a healthy action by remedies, and still more so by strict diet. Yet the positive bodily pain in the head, during the paroxysm, maintained its ground, even while the treatment was in progress, and after the general disorder had greatly abated; nor could any prompt means be found to alleviate or disperse that pain, although most of the usual external applications generally recommended in such cases were resorted to for that purpose. It is to be understood, that during the paroxysm, which

would often last two and even three days, such was the degree of pain, that the patient could only live in some degree of ease by remaining confined to his bed, in a dark room, for the whole period. About a twelvemonth back I happened to be again the attending physician on his lordship, for an attack of disturbed digestion, accompanied by sympathetic and rheumatic pains in the lower extremities and across the pit of the stomach, as well as by swelling of the legs. Diet, simple but effective aperients, and the use of mineral waters, gradually and somewhat promptly restored the general health; but the tendency to headache remained, though it occurred now but rarely; and when it prevailed, the patient suffered agonies as keen as if his general health had not been restored. On one of these occasions, being the 24th of May, 1835, I happened to find his lordship so ill with it, that he would hardly allow me to open the shutters of the room, for the purpose of examining his tongue and his countenance. This was the first attack for nearly three months since I had been in attendance; and, according to former experience, my patient expected to be confined to his room by it for three days at least. Anxious to relieve him from so much suffering, I brought to his lordship's recollection my success in quickly subduing nervous headaches, by the application of ammoniated counter-irritants, in several of his own acquaintances, and in the case also of his own brother; and I begged to be allowed to use the same in his case. Permission being granted for the application, it was immediately carried into effect; and I have only to add a few words more, for the purpose of stating that the patient soon after got up to take his coffee with his family in the drawing-room, being then entirely free from headache—and that I so found him the next day.

CASE XXXIV.

The Right Honourable R———, who at one time occupied a distinguished post in the councils of his sovereign, and, deservedly so, in the estimation of his countrymen, was and had all his life been subject to nervous headaches of the worst description, which disabled him from doing any business, and confined him for two or three days together, and sometimes longer, to his room. During my attendance on his lady, upwards of fifteen years ago, and also on his daughter, I had had ample opportunities of witnessing in this gentleman this species of nervous paroxysm of pain in the head; and lamented, in common with the rest of the faculty he had consulted, that art could offer no remedy but patience for such sufferings. Here, again, the stomach was at fault, and it must be admitted that the patient's diet was also at fault *vis-à-vis* his stomach. But even when both these defects had been set to rights, and reconciled by a proper treatment, the consecutive nervous suffering would still go on, and appear altogether unmitigated.

The frequency of these headaches had compelled him at last to

retire from the more active and conspicuous duties of public life, though not so entirely but that he would, when not disabled by his periodical enemy, which visited him two and sometimes three times a month, attend in his place in the house of commons. On one occasion (1830), it became particularly desirable that he should attend, in consequence of an expected division of great importance, —one of those powerful struggles, or trials of strength, which occurred in the hot days of approaching reform. A single vote was then of importance; yet that vote my patient felt perfectly incapable of going down to give, in consequence of labouring at the time under one of his worse paroxysms of nervous headache. I had often suggested to him, when under similar visitations, to make trial of the antidysinous lotion of which he had heard; but he had always resisted it, under the apprehension of having a blister. On the occasion alluded to, however, the urgency of the political interest at stake, and the anxiety of his political friends, induced him to forego all such apprehensions; and accordingly I received, at two o'clock in the afternoon, from Grosvenor square, the following summons:—"Mr. ——— acquaints Dr. Granville, that the access of pain in the head is bad enough to make him wish to try the experiment, if Dr. Granville happens to be disengaged, and can call upon him immediately." At four o'clock I was with him in his dark room, where he was lying suffering to a degree scarcely to be described. I applied a compress on both temples, saturated with a moderately strong ammoniated counter-irritant. In three minutes and a half the pain had considerably abated in front and over the eye, but the back part of the head was still suffering. I next laid a compress on the nape of the neck, and in five minutes the pain was equally dislodged from that quarter. At five o'clock of the same afternoon, Mr. R——— mounted his horse, and went down to the House, and was present at a very late division, without suffering any inconvenience.

CASE XXXV.

The lady of a wealthy baronet, member for one of the western counties, had been, during the space of three or four years, labouring under a severe affection of the mesentery, which had induced considerable atrophy of the body and general weakness. For this complaint my attendance was required, and in the course of three months, by dint of the strictest diet, and some trifling alteratives, the general health, and withal the appetite and the power of digesting food, were restored (1833). Along with the general derangement of the system, however, which had existed before, there had always been present a great tendency to acute nervous headaches, not manifestly dependent on, nor influenced by, to any great degree, the varying condition of the digestive organs. These I proposed to cure by ammoniated lotions, and the result of them was to the utmost degree successful. Not only was the first headache for which they

were made use of instantly relieved, but every succeeding attempt of the complaint to return was as instantaneously checked, by the same means, resorted to by the patient herself,—until at last a headache of the same sort became in her ladyship's case a rare occurrence.

CASE XXXVI.

Such was the confidence which the patient mentioned in the preceding case acquired, in the virtues of the ammoniated embrocations for the cure of nervous headaches, that she undertook to treat, with their aid, all such cases as came within her reach, either in her own family or among her friends. The first trial she made was with Miss —, her daughter's governess, who from close attention to her duties, and equally close confinement, had made herself liable to frequent paroxysms of nervous headache, principally in the temples. In one of these Lady — applied the ammoniated lotion I had prescribed for her general use, and in three minutes the headache was dispersed, though a blister was formed at the same time.

CASE XXXVII.

The success in the one case induced the same lady to recommend the ammoniated lotion to a friend who was staying on a visit at her house in town in 1833, and who, after having prepared herself one day for the drawing room at St. James's, found herself so ill, from a severe nervous headache which came on after an hour's toilet under the hands of Isidore, that she had decided on foregoing the pleasure of appearing at court. However, her hostess prevailed on her to try the effect of a small compress on each temple, saturated with a counter-irritant lotion, as in that place the plat of hair as worn in modern days, would conceal any redness or slight vesication which might follow the application. Mrs. P—, the sufferer, consented, and the result was of the most satisfactory description. The headache disappeared and no vesication followed. Lady — has very lately assured me, that while residing in the country, in a populous district in Devonshire, she has often had occasion to test the power of the ammoniated counter-irritants in nervous headache, and that the application has always maintained its character, as being the quickest and surest mode of curing that disorder.

CASE XXXVIII.

Miss V— P—, since married, was attacked one day (21st of May, 1830,) with a most intense, and as she called it, intolerable nervous headache, which had lasted a whole day when my attendance was required. The eyebrows were the principal seat of the pain, but even the eye-balls, when pressed by the finger, felt sore. She could neither bear daylight nor candlelight. I applied at once

a large compress with an ammoniated lotion on the nape of the neck, and kept it on for nine minutes and a half, without the slightest appearance of a blister. At the expiration of that time the headache was completely gone, and did not return.

CASE XXXIX.

A young woman aged 15, servant to a lady whose case of lumbago, cured by an ammoniated application, will be detailed hereafter, was subject to acute and frequent headaches, which disabled her from doing any work. She used to awake with it, and on that day she seldom could leave her room. The pains, at times, were so acute, that it seemed for a moment to affect her senses, and her mistress used to notice that she gave occasional unapt and incoherent answers when labouring under a severe paroxysm of the complaint. Encouraged by my recommendation of the ammoniated lotions, as the means best calculated to disperse quickly and effectually all nervous headaches, and also bearing in mind the example of her own recovery from an attack of lumbago, Mrs. R.— treated her maid Eliza Grantham in the same manner, whenever she was afflicted by headache, and on each occasion put a stop to it at once by the counter-irritating application.

CASE XL.

Mrs. Applegarth, of York street, Bryantson square, after the death of her husband,—whom she had incessantly attended during a protracted illness, which ended in consumption,—became seriously indisposed, and suffered, among other distressing symptoms, from intense nervous headache, principally situated at the top of the head, and occasionally extending to the ball of the eyes. I have repeatedly seen her in attacks of this kind, in the course of the last three years; and on each occasion the headache, which, when left to itself always lasted upwards of twenty-four hours, was entirely removed within scarcely as many minutes by the ammoniated counter-irritant.

9.—ODONTALGIA, OR HIGHLY PAINFUL TOOTHACHE.

This complaint (for it is one notwithstanding its homeliness) is too well known to require any preliminary remarks. I observed in another place that almost every body thinks himself in the possession of a sure remedy against toothache, which he will recommend to others, though he take care not to use it himself. There is not another complaint in the whole catalogue that calls forth with greater certainty the spontaneous offer of an infallible specific from an officious friend. Henri Quatre, in one of his joyous moods, laid a wager with a favourite courtier, that he would, in the course of

two hours, convict almost every one connected with the court of quackery. He tied up his cheek in a scarf, and held a pocket handkerchief to his mouth; and in this state he appeared in the royal apartment, to receive his courtiers, or wandered through the long and frequented galleries of his palace. Every one who had the honour to approach the Bearnois king, enquired about his health, and immediately propounded a specific for the pain under which the sovereign was supposed to be labouring; and thus, in the course of two hours, his majesty collected fifty receipts for the complaint for which I am about to offer only one, and gained his wager.

Now the toothache with which I have to deal in this place, is that which mainly depends on the exposure of the nerve, proper to each tooth, to the action of cold air, cold drink, or accidental violence. It presupposes a carious, or decayed tooth; but the latter state of the tooth is not absolutely indispensable to the production of pain in the nerve. Again, the toothache I allude to, as a purely nervous complaint, is not one of your ordinary affections of the teeth, which is of every day occurrence, and seems more inconvenient than particularly distressing. It is on the contrary a highly painful disorder, extending very often to the interior of the ear, up into the globe of the eyes, and into the head, or down the muscles of the neck, which it will sometimes crisp, or contract, as if many of the numerous branches of nerves were sympathetically affected at the same time.

Such a toothache as this is really deserving of the attention of the medical man, either as being connected with some other serious disorder of the system, or as being the produce of some cause, which, independently of the toothache, may go on exciting some more important complaint. It is also deserving of serious consideration, as a mere pain of the nerve of the tooth; since such a pain, being in itself a source of irritation, if the later be allowed to endure long, all the principal functions of the body will be inevitably disturbed. To discover, therefore, a simple external application that should instantaneously check the progress of the pain, under such circumstances, and ultimately cure it, was a problem requiring to be solved; and the external application which is capable of performing that duty will be found to be a moderately strong ammoniated or antidynous lotion. The process of treatment is as simple as the cure is immediate. I do not recollect a single example of a genuine toothache, such as I contemplate, in which having been consulted for some immediate relief (with a view to save a journey to the house of a dentist), and having recommended the application of a little of the ammoniated counter-irritant, either externally on the cheek corresponding with the pained tooth, or upon the tooth itself, —I was disappointed in the result. Out of all the examples of the complaint I have seen, most of which occurred at my morning consultations, I have selected four, because in them the intensity of the pain was violent, and also because, in two out of the four cases, the sufferers themselves chose to apply the remedy, simply from know-

ing that I was in the habit of recommending it. By such a selection I subject the remedy itself to the fairest trial of experience that could be devised.

CASE XLI.

A foreign lady of high rank, whom I had had the honour to accompany some years before to a distant country, in the capacity of physician, is the first subject whose case, of very acute odontalgia, I shall briefly relate. Whilst residing in this country she was twice affected by that complaint, in its severest form, within the space of three months; and I must add that I have seldom witnessed expressions of greater agony than in her case. "Pray do come this evening without fail, to Stanhope street, if you cannot dine with us; for the Countess — is suffering dreadfully from faceache." Such was the message I received at noon on the 13th of April, 1832, from the sister-in-law of the patient, at whose house she was then on a visit. At half-after eight o'clock, P. M., I saw the sufferer, who had not been able to join the dinner-table, and was pacing one of the drawing-rooms, holding something warm to her right cheek, which was swollen, and highly painful to the touch. With difficulty she pronounced the few words required to express the intensity of her tortures; and on my attempting to open her mouth a little, with the handle of a spoon, in order to examine the state of the teeth of that side, the part was immediately thrown into a species of convulsive trembling. I collected enough, however, from her sister, to ascertain that one of the back teeth, if not two, was supposed to be decayed; although no visible marks of it existed on the surface of the teeth; and that in the then state of the parts, with so much inflammation and swelling of the cheek present, any attempt at extracting the tooth was by the best surgeon-dentist, who had been consulted, deemed impracticable. In default of every other relief, therefore, lancing the gum had been had recourse to; and this failing, laudanum enough to lull at first, and afterwards a stronger application of it to deaden the nerve of the tooth, had been used; but all to no effect. On the other hand it was next to impossible to foresee when the swelling might subside sufficiently to allow of the proposed extraction of the tooth. Here, then, we had the case of a patient suffering from a most agonising affection of the nerves, in which "time" alone was to be looked to for a prospect of ease. Such a case, therefore, was precisely the one in which it might be seen whether a local application, the power of which in controlling nervous pain had been fully proved under other circumstances, could not be made to afford that degree of relief which alone would be welcome to the patient—effectual if possible, but instantaneous at all events. A compress, saturated with an ammoniated lotion of ordinary strength, was consequently applied to the posterior half of the cheek, towards the ear and angle of the jaw. I prepared it so effectually, that at the expiration of half a minute, by the watch,

the external pain produced by it was so extensive, that the patient could not distinguish whether the toothache still continued. All doubts, however, were soon removed; for at the end of two minutes more, the compress being taken away, in consequence of its having produced a full blister, no pain of any sort was left behind in the tooth, but only the slight uneasiness which remains for a very short time in blisters of this sort. The following morning I learned, that the lady had slept profoundly throughout the night, and that the swelling having subsided, the teeth had been examined, when it was deemed unnecessary to have recourse to extraction.

This patient suffered no further attack of the same sort until July, 1832, when I was again desired to give my attendance in consequence of a very severe and sudden seizure of earache, on the same side of the head, brought on by exposure to a constant draught of wind blowing into the ear, from the open window of a close carriage, during a long airing. The pain extended soon after from within the ear to the tooth which had been formerly affected, and involved the same parts, previously concerned in the attack of odontalgia, in a general paroxysm of fever and suffering. The compresses with the lotion in this case were applied behind the ear as well as immediately in front of it; and as the cheek was not now swollen, so that the mouth could easily be opened, a small quantity of the same counter-irritant was conveyed by proper means to the painful tooth. This attack ceased altogether as rapidly as the former one; and I understand that at last a large decayed tooth was removed, but not until a long time after.

CASE XLII.

On the 19th of January, having received an invitation to dine a few miles out of town, with a nobleman whose lady I had then the honour of attending, as well as his only son,—I arrived a few minutes before the time appointed, when I found Viscountess —— in the drawing-room dressed for dinner, but suffering from such exquisite pain in one of the teeth of the lower jaw, on the left side of the face, that she was about to retire, intending not to join the family at dinner. The pain affected the ear, the whole cheek, and extended into the orbit of the eye. It had first come on soon after breakfast, and had not only continued, but had kept increasing in violence, during the period that had elapsed between the morning repast and dinner-time. Fortunately there was in the house a bottle of ammoniated counter-irritating lotion, which her ladyship kept in case of requiring an instantaneous blister for some sudden attack of inflammation, for which she might not be able to procure immediate medical aid at that distance from town; and I urged her to permit me to use it for the removal of her toothache; as I felt convinced that by that means she would yet be enabled to sit down to dinner with sufficient comfort. Upon her consenting, a compress, saturated with the lotion, was applied to the under part of

the lower jaw of the side affected, and kept in that position for a minute and a half by the watch—the intention being, if possible, to prevent the formation of a blister. The pain went away immediately, and her ladyship remained free from it that evening and all the rest of the night. When Lord —, who, at that time, occupied a ministerial station of great importance, returned from town to dinner, he learned at one and the same time the history of his lady's acute sufferings for several hours during his absence, and the instantaneous cure of them immediately after my arrival.

CASE XLIII.

A lady, living as attendant and reader with a patient of mine much advanced in years, in the neighbourhood of Park lane, had heard me recommend, in the course of conversation, the application of a counter-irritating lotion, as an excellent and generally certain remedy for acute toothache. One day in the month of August, 1837, being herself attacked with that highly painful complaint, which had prevented her from sleeping for two nights, and had entirely taken away her inclination for food; she recollected my recommendation, and knowing that a small quantity of an ammoniated lotion, which had successfully served to remove a paroxysm of spasm in the back of Lady —, with whom she was living, was still left in the house, proceeded to use it in the way she had seen me use it before. The result was that she stopped the pain in the tooth immediately. This occurred during my short temporary absence from town. On my return, Mrs. G—d not only informed me of this fact, but also that she had cured in the same manner, and of a similar highly painful attack of toothache, the cook and two servant-maids in the house.

CASE XLIV.

A young lady, formerly governess to my eldest daughter, was staying on a visit at my house in April last, when, after an accidental exposure to one of those dreadful cold easterly winds which had so greatly prevailed during the winter, she was one morning seized with a most excruciating pain in one of her teeth in the upper jaw, which kept increasing during the day, and kept her awake the whole of the night. On the following morning, unable to bear the pain any longer, she meditated proceeding to some dentist, to have the tooth removed, as she knew it to be partly decayed. She was, however, prevented from doing it by the ladies of the family, who suggested the use of the ammoniated lotion, with the virtues of which they were all well acquainted. A bottle of one of those applications was consequently procured from my room, and a small quantity conveyed to the affected tooth and surrounding gum. The toothache almost immediately ceased. Threatening, however, to return in the evening, the application was

repeated, externally as well as internally, when all further suffering was suspended, and to this moment no fresh attack of toothache has taken place.

SECTION II.

CASES IN WHICH THE MUSCULAR SYSTEM AND THE TENDINOUS TISSUES WERE PRINCIPALLY AFFECTED.

1. RHEUMATISM. { Acute. { Chronic.

It is not my intention to enter into a disquisition on the nature and locality of what has been generally denominated rheumatism; neither is it required in a work like the present that I should do more than simply state what I mean by rheumatism, while I propose to bring forward cases of that disease in which counter-irritation has been employed as a means of recovery. Most of my readers know—some of them very probably from sad experience—that there is a peculiar affection of the joints, large as well as small, which is attended with pain more or less acute, often accompanied by swelling, by increased temperature, by tension of the skin, by redness, by throbbing, and by an exaggerated sensibility of the part. General fever is the concomitant in such cases; and the disease, which will often come on unexpectedly after the development of particular causes, will proceed through its various stages, like other febrile, eruptive, or pyretic complaints, in the course of seven, fourteen, or more days, and subside like them, after a well-marked crisis, either through the pores of the skin, or the secreting action of the kidneys. This is an ordinary description of what is called acute rheumatism. That it is painful, and oftentimes dangerous—that it requires the best skill and attention of the physician—and that it puts to the test the utmost resignation and forbearance of the patient—it is needless to state. The most serious consequences will often result from such a complaint; and one of them, and that not least to be deprecated, is the liability it generates of a return—which, if frequently repeated, and the disorder does not in the mean while prove destructive to the patient, induces an almost permanent morbid condition of the parts. Then the disorder obtains the common appellation of chronic rheumatism.

As I have before remarked, this is the simplest as well as the most superficial outline I can venture to put forward in such a work as the present, of rheumatic complaints,—as they are termed in common parlance; but I am aware that, even in so simple a description as the preceding, I have embraced many symptoms which do not always make their appearance, either together, or in the order in which I have placed them. Hardly two cases of rheu-

matism can be found in practice, which shall be precisely alike. Some, for example, are accompanied by more, and some by less fever; while others again scarcely exhibit any febrile movement at all. In some instances the pain is fixed to one or more joints, and the attack ceases without affecting any other; whereas in other instances the pain will invade every joint, shifting from one to the other, and leaving none untouched before the complaint wholly subsides. On the other hand, cases will be met with in which the pain does not occupy the joints, but only the large and long muscles in the body, no matter where situated; so that it would be an error to say that rheumatism is essentially an articular disease. Again, redness of the skin, with increased temperature, generally marks the seat of the disorder: but it also not unfrequently happens that the swelling (equally painful) is of the natural colour of the skin, though shining; and the external heat is hardly to be distinguished from that of the surrounding parts, although the patient himself be sensible of an increased temperature within the diseased joint. In fact, to attempt to describe, in one general sketch, all the varieties under which rheumatism presents itself to the notice of the physician in extensive practice,—and especially to do so in a work written for popular, and not for professional readers,—would be to attempt that which no medical author has as yet been able to accomplish.

With these few preliminary observations, therefore, on the subject of acute and chronic rheumatism, I proceed in my task of medical historian, and shall lay before my readers the narrative of such cases of the complaint in question as have, or have not, been benefited by external treatment founded on counter-irritation; stating at once, and once for all, that in almost all the cases of acute rheumatism, and in a few of the chronic attacks in which I have used any of the ammoniated counter-irritants, the pain has been very quickly relieved, and the recovery of the patient materially hastened.

CASE XLV.

Acute Rheumatism, the pain shifting from one joint to another.

This was the case of a lady residing at Highbury Grove, Islington, who was attacked with acute rheumatism, four weeks and three days after her confinement, in consequence of exposure to a cold and damp atmosphere, on the day she went out of her house to be "churched." I did not see the patient for two days after the attack; as it was hoped that rest, and the promotion of perspiration, would soon remove the complaint. The lady was at the time nursing. Upon the joints of the shoulders, elbows, and wrists, however, becoming permanently more painful, and the parts swelling, I was desired to pay a visit to the patient, at which I prescribed the usual remedies employed in such cases. It was hoped that the disorder would not exceed two or three days, as the pulse and other symptoms seemed to indicate a mild form of acute rheumatism. At

the same time I left directions that if the pain in the joints already affected increased, or if it shifted suddenly to another part, an ammoniated counter-irritating lotion should instantly be applied to such parts, with a view of quickly extinguishing the pain. It appears from my notes taken at the time, that even the moderate pain then existing had affected the milk, and had consequently disturbed the health of the child. This occurred on Wednesday, the 4th of August, 1830. On the succeeding Friday I received the following written message, as I had been prevented from driving out to Islington the day before to see my patient: "The pain I was complaining of when you saw me, still continuing very severe, and being rather on the increase, and it having yesterday communicated itself to my hip and knee, as well as to my shoulder again, I have been unable to lie down in bed all night; for whenever I attempted so to do, the pain was so violent that I could not draw my breath at all, and it seemed to shoot from the hip to the shoulder, through my breast. This being the case, Mr. — (her husband) considered it advisable to follow your direction, and applied the counter-irritating lotion by means of a compress, first to the hip-joint, next to the shoulder, and lastly to the knee; on all which places it was suffered to remain pressed down by the hand, from three to five minutes. At the expiration of that time the pain had quite vanished, and I could breathe freely. On the hip it has left a slight blister, which teases me, and I shall therefore be obliged to you to call at your earliest convenience. But I am too thankful, even with it, to have got rid of my torments so quickly, and at so cheap a rate," &c. &c.

CASE XLVI.

Acute Rheumatism of the right thigh, from the hip downwards.

Macintosh, a man-servant of a particular friend of mine, residing at Stanley Grove, had been for several days in August, 1830, labouring under a most excruciating rheumatic pain, from the right hip down to the calf of the right leg, which had induced fever, sleeplessness, and a total want of appetite. This person had been addicted to free drinking, and had injured his health to such a degree, that consumption followed, which in a year or two after the period here alluded to, caused his death. On the occasion in question, it being essential that he should, as soon as possible, be made fit for duty, and freed from the acute pain under which he was suffering, a large compress, saturated with a moderately strong ammoniated counter-irritant, was applied to the hip, and a smaller one to the knee, in both which places they were retained by bandages until they were dry. At the end of a quarter of an hour there was found a blister on the hip, but none on the knee, and no more pain existed. The patient, who for three days had been hardly able to walk from the outer offices to the house with the view of being examined by me, walked up to town two days afterwards, to thank me for his recovery.

CASE XLVII.

Acute Rheumatism in the arm.

The gentleman alluded to as being the master of the patient mentioned in the preceding case, was attacked with a rheumatic pain in the arm, in the first week of November, 1830. On the 12th of that month his lady, who had witnessed the immediate recovery of Macintosh, wrote to me to request I would desire the chemist to send her a proper ammoniated counter-irritating lotion (which she styled invaluable), with a view of applying it to the arm of Mr. —, for the removal of his rheumatism. The request being complied with, the lotion was applied, and the pain immediately removed.

The same gentleman, writing to me on the 26th of June, 1835, from Scotland, where he was staying on a visit to a noble earl, well known as a most efficient promoter of the fine arts, announced, in the following brief lines, another instance of the efficacy of the ammoniated or antidynous lotion, in curing rheumatism, at the same time that it had proved inefficacious in organic tic douloureux: "I wish I could tell you that the prescription of your counter-irritating lotion had been of use to Lord —, by alleviating his dreadful sufferings from tic; but as it has just cured him of an *attack of rheumatism*, I hope he may derive further benefit from it," &c. Whether the nobleman here alluded to did or did not derive any benefit from the counter-irritant proposed, I never made it my business to enquire, as his lordship was not my patient. From the knowledge I had of the nature of his case, considering the attacks of tic douloureux to be dependent on organic mischief, I could not expect, nor have I in any other similar case anticipated, any material or permanent advantage from the employment of a counter-irritant.

CASE XLVIII.

Acute Rheumatism of the left knee.

The husband of the woman who kept the first lodge at Nocton, where I was staying on a professional visit to its noble proprietor, in October, 1833, was attacked with acute rheumatism in the left knee, which in the course of twenty-four hours swelled to a considerable degree in the inside, and became so painful, that he neither could lift up the leg, nor allow it to be touched for the purpose of its being lifted off the bed, without suffering excruciating tortures. Having found him in this state, when I visited him immediately after I had been apprised of the case, and observing that considerable febrile disturbance of the system prevailed at the same time, I ordered some calomel, with opium, and James's powder, at bedtime, and a diaphoretic mixture throughout the night, as well as an effectual aperient draught in the morning. The constitution and make of the patient appeared very robust. Before the evening had

arrived, the pain had become considerably worse. On the following morning, the medicine having produced all the effect that could be desired, the attack, particularly the pain of it, seemed to have subsided. There was but little fever left, and the general surface of the body was in a state of complete perspiration. The affected leg, nevertheless, continued exquisitely tender to the touch, the knee still swollen on both sides, and the part felt to the touch as if within there was fluctuation. The diaphoretic mixture was ordered to be repeated through the day; but in the afternoon the patient got again much worse with regard to local suffering, and my attendance was consequently requested. Thinking it important to endeavour to stop the pain at once, and thus secure to the poor fellow a quiet night; and on the other hand, knowing that unless the increasing irritation kept up by the painful affection of the knee-joint was abated, rheumatic fever would be set up, and the case become troublesome, I at once enveloped the knee in a large compress saturated with an ammoniated counter-irritant, and determined on leaving it on all night, tied down by a suitable bandage. I remained with the patient during the first ten or fifteen minutes of the application, which smarted greatly, and made the patient exclaim, that he felt "as if the knee was on fire." After the first five minutes had elapsed, he begged to have the application removed, and would have torn it off, had it not been well secured; but at the expiration of a quarter of an hour, not only had the painful sensation produced by the lotion nearly ceased, but the rheumatic pain also; and I understood afterwards that both ceased altogether before eight o'clock in the evening, when the patient fell into a profound sleep, and passed a quiet night.

Next morning he was surprised to find that he could move his limb, and when I visited him after breakfast, I found him in his little parlour, having walked down stairs from his bedroom without pain or inconvenience. On examining the part, a very large bladder, yet intact, containing a prodigious quantity of serum, was found to surround the sides and back part of the knee. This vesication broke in the course of the day, and the blister continued to run the whole of that day and the next, when it dried up, and the patient resumed his labours, perfectly recovered. Thus in forty-eight hours a very formidable attack of acute rheumatism in so delicate a part as the knee was put an end to.

CASE XLIX.

Chronic Rheumatism (Sciatica) of the left thigh.

The Rev. —, chaplain to one of the principal foreign embassies in London, of robust constitution, but subject to regular attacks of gout, to lumbago also, and to rheumatism, aged seventy years and upwards, requested my attendance on the evening of the 2d of October, 1830, in consequence of an attack of excruciating pain, beginning in the sciatic notch, and extending along the sciatic nerve

of the left thigh. He was not in any other respect unwell; but he suffered so much from pain, that he could not sleep at night, neither could he walk in the day without the help of a crutch. On the day I saw him, and the following, some of the usual remedies prescribed in such cases were ordered, without however alleviating the pain in the smallest degree. An ammoniated counter-irritant was at last applied, and the pain went away in half an hour; so that not only could the Rev. —, move the limb freely after that time without the slightest uneasiness, but he was able to walk without the crutch. The pain never returned.

CASE L.

Chronic and wandering Rheumatic affection throughout the body.

J. K——, Esq., residing, in the year 1832, in Grosvenor street, had been subject for some years to acute, short, and piercing pains, in almost every part of the body, particularly the limbs, their several articulations, and at times in the muscles of the head, the chest, the back, and the abdomen, upon the slightest exposure to damp air. These several places were, on some days, when he laboured under the severest form of his attacks, visited all in succession; but very seldom indeed any two or three of them together. There was no fever at the time, nor swelling of the part, but tenderness when it was touched. The frequency of these attacks, and the length of time during which the pains lasted, without sensible mitigation from any remedy that had been suggested, had induced such a state of irritability in the system, that Mr. K—— was become what is termed a “nervous subject,” and he had lost flesh considerably. Having heard from a friend, whom I had relieved of rheumatic pain by an ammoniated lotion, of the decided beneficial effects it had had upon him, Mr. K—— applied to me for advice. I did not hesitate a moment, after hearing his statement, to recommend the application of the same external remedy, wherever he suffered pain; and in three days I had the satisfaction of seeing him again at my house, to report not only that he was himself completely cured of his pains, but that he wished to try the same remedy on his mother, who had laboured for some weeks under nearly similar symptoms. In due time I learned that this lady, like her son, had found an immediate and effectual relief, in the external application recommended.

CASE LI.

Chronic Rheumatism in a lady, mistaken for an inflammation of the left ovarium.

This is an important case, because the symptoms of rheumatism were so doubtful, owing to the peculiar seat of the pain, that an eminent physician accoucheur, one of the leading surgeons of the day, and myself, were all equally mistaken as to the real nature of

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the affection, and decided at last that it must be an attack of slow and insidious inflammation of the ovarium on the left side. The lower portion of the abdominal muscles on that side, those of the inguinal region, and those which cover the edge of the hip-bone and its outward face, were all tender, and at times exquisitely painful. Immediately within the cavity of the iliac region the young lady could not bear any pressure; and when asked a question to that effect, she admitted that she always felt a throbbing in that part. This affection had crept on gradually, and had lasted some months before I saw the patient, who was distantly related to one of the leading political characters of the day. Though naturally a handsome person, and still a young woman, she was already reduced to a pitiable state, not only of emaciation, but in appearance also. She could not keep any other than the horizontal posture. After two years passed in this manner, visited during the few months she passed in town at her sister's in Cumberland place by her medical attendants, it occurred to me (who had, at last, been left in sole charge of the case,) that the nature of the disorder might, after all, be of a rheumatic character. I was led to this conclusion from having noticed that, occasionally, the patient was attacked by decided rheumatic affection in the hip of the opposite side, which would shift sometimes to the shoulders, sometimes to the knee of the same side; and that during such attacks the original pain in the left and lower side of the abdomen was either not felt or was completely suspended. As we had in the mean time run pretty nearly through the entire pharmacopœia, in the vain expectation of affording relief, I now proposed to try the effect of an ammoniated counter-irritant, of a suitable strength—or as I termed it to the lady, of the blistering lotion—my intention being that it should produce blisters; and this I offered as a *dernière ressource*; being convinced in my own mind that the case was incurable, but might be relieved. The effect was such as I anticipated. The lotion produced notable relief; so much so, that the patient ventured, at about the middle of July, 1831, again to return into Suffolk, where she was to continue the external application as before, in hopes of conquering at last the habit of pain, if I may use such an expression, and whence she addressed to me the following note on the 2d of August:

“I bore the journey very tolerably; but for the first few days afterwards I felt excessively fatigued, and the swelling in the old place and the leg gave me a good deal of pain.” For the last two days I have tried the lotion again, and the pain under its action is subsiding. I imagine that the sea-air makes my skin tougher than ever, as I cannot get the lotion to have the effect of making the least blister under half an hour; nor can I keep them open when made. I have had two, and they heal in a very few hours. But although that is the case, yet I think they *have relieved the pain very much.*”

This case never went beyond relief.

CASE LII.

Chronic Rheumatism of five years' standing, affecting the knees, the ankles, the wrists, and the elbows, and producing a complete stiffening of those joints.

My only motive for bringing forward this most lamentable example of a highly-painful disorder, is to show that even such powerful agents as the ammoniated counter-irritants habitually recommended by me, can make but little impression on them. In this case a lady, connected by marriage with the aristocratic class of society, had contracted an articular rheumatic affection, by frequent exposure on damp ground to misty and damp atmospheres,—sometimes, indeed, during the prevalence of rain,—in the pursuit of the innocent recreation of gardening, which was followed up with a perseverance that nothing could interrupt. Disease at last put a stop to such occupations, and from the first moment of the rheumatic affection appearing in the knees, to the time of my being consulted, Mrs. H— D— had passed five years in undiminished sufferings. The disease, at first, affected only one side; but in an evil hours he listened to the advice of some person evidently unacquainted with the real nature of the thermal springs of Aix-la-Chapelle, and proceeded thither to bathe in one of them, from whence she returned with the other side of the body affected, and the side previously diseased made still worse. From that moment every thing went on from bad to worse; until at last almost all the joints of the lower extremities, and some of those in the upper extremities, were reduced as near as possible to a state of immovability. On my examining the parts, I found them more or less disfigured by large swellings; they were tender to the touch, and could bear pressure indifferently. Some slight indication of motion might be obtained by coaxing and manœuvring, but none by the will, in the joints that were most affected. One or two of them, those of the wrist for example, would at times show a disposition to amendment and flexibility; and I recollect that especially after a very decisive and effectual treatment by internal medicines under my care, when I was first in attendance, such was the amendment that had taken place, that the patient had been able to use her hand and wrist in penning a letter or two, though with difficulty.

It is scarcely necessary to observe, after such a description, that Mrs. H— D— had not, for many months, been able to move or walk unaided: and it must be borne in mind also, that in consequence of a frequent recurrence of paroxysms of acute rheumatism, the evil results of that complaint (already manifested and fixed in so distressing a manner) were each time increased in intensity; every fresh attack of the *active* disorder superadding, as it were, a fresh load of its consequent inconveniences to its already existing *chronic* form.

Under these circumstances, I at one pronounced the impossibility of affording any real relief, or permanent improvement, in the power

of moving the joints, by the application of any external remedy,—except as an auxiliary to some general treatment of the active and acute disorder, with a view to check the pain of the limbs—which was invariably increased at each succeeding paroxysm. With this intention the ammoniated counter-irritants were applied, as vesicatories, by which large discharges of serum from the swelled parts in the wrists and knees, and a corresponding diminution of suffering or pain, were obtained. But beyond this, the local application, like many others which had been tried before, produced no very marked benefit; so that after a persevering trial of some weeks' duration, the treatment was abandoned.

I wish to make a single remark respecting another external application, which was tried with my consent, for a few days, at the desire of the patient's relatives, and on the faith of advertisements in the public journals. I allude to Lefay's pomatum. On the first day of rubbing this preparation on the left wrist, which was then very painful, and had kept the patient in a state of irritation all night, the pain was lulled, and at length gave way, when rest and sleep followed. The same results were obtained several times after, under nearly similar circumstances; and I felt satisfied, from what I saw and heard of the patient's state, that the preparation acted as a counter-irritant only (producing tingling, &c.), and not as a specific remedy, through absorption, or any alterative agency possessed by the ingredients. However, at the end of a fortnight, the pomatum ceased entirely to have any effect, as all other counter-irritants had done before; and as long as the patient remained in town I confined my professional attention to the general and constitutional symptoms, which I found to be better relieved by powdered colchicum, with Plummer's pill at night, and prussic acid during the day, than by any other remedial agent. The result of such treatment was the restoration of her general health before she left town, and the cessation of those frequent attacks of acute rheumatism to which she had been subject before, as well as for a short time after my first seeing her. Even in the cold month of November, 1835, writing from a much exposed place on the southeast coast of England, she informed me that "her health had kept perfectly good, but that there was no improvement in the rigidity of the joints, neither had they decreased in size to any notable degree. She slept well, and her appetite was good: her hands also had become a little stronger, for she could use her pen; but in other respects the character of her complaint continued much the same, though she had resumed and persevered in the use of the counter-irritating lotion." Towards the end of the letter the patient adds, that in some points the disorder seemed inclined to attack the shoulder, and the articulation of the neck. "I have occasionally," she states, "put Lefay's ointment to my neck and collar-bones, which has given abundant tingling, but produced no relief."

2.—LUMBAGO.

I have separated this painful affection from its kindred class of rheumatic complaints, because it is oftener the result of violent strains and sudden exertions of the muscles in and about the loins, than the produce of a constitutional malady. I have also so separated it, because the same internal treatment which will cure rheumatism will not benefit lumbago; while on the other hand the means which remove the latter would prove inefficient in eradicating the former. Lumbago also requires to be considered apart from general rheumatism, in consequence of its being always a muscular, and not an articular disease. In speaking thus of lumbago, I wish it to be understood that I do not refer to, or mean to take into consideration, that form of the disease which is called sympathetic, because it is supposed to depend either on indigestion or a foul state of the intestines—on gravel—or some other internal disorder. I simply look, in this place, to the two modifications of lumbago which prevail mostly; namely, the merely rheumatic, which is a spontaneous and direct affection of the muscles attached to or connected with the lumbar vertebræ; and the painful affection of the same muscles, which is the result of a sprain or violent exertion. Both are benefited, and their cure considerably expedited, by ammoniated counter-irritants.

Out of a great many examples of a speedy recovery from these two forms of the disease, due to the counter-irritants in question, I select only four, which I will detail briefly.

CASE LIII.

Severe Lumbago and Sciatica.

The butler of the Right Hon. Sir G———, a tall, strong-made man, though spare of flesh, after enduring for several days the most acute pain in the loins, which had of late extended along the sciatic nerve, so as to involve in one accumulated mass of suffering the whole of the muscles of the loins, as well as the muscles covering the left iliac and sciatic region, and those of the upper and posterior part of the thigh (in consequence of which he had not been able, during that time, to move from his bed,) requested my attendance on Thursday night, the 11th of March, 1830—his agony having then become insufferable. The slightest movement augmented the pain to a degree scarcely to be credited, and induced nausea and shortness of breath. He had been subject to attacks of gout; of one of which he had indeed, at the time, something like an active indication in the great toe of the same side,—for it was red and rather painful.

For the present complaint every means to which medical art has recourse for its cure had been adopted, but without the smallest success. He had been treated generally as well as topically, yet without deriving even the most trifling alleviation of pain. Under

such circumstances I had no other resource to offer but the ammoniated counter-irritant,—which I applied myself, immediately to the sciatic notch, and a smaller compress also, with some of the same liquid diluted, to the inflamed toe. The applications were bandaged tightly on, and were to remain so all night. On the following day I learned that in twenty minutes from the time of my leaving the patient the lumbar and sciatic pain had completely ceased, and that he had slept all night. Vesication had taken place, and a very abundant discharge of an exceedingly excoriating serum had followed, in consequence of which the subsequent healing of the surface became somewhat troublesome and tedious. At this visit the patient assured me that he was quite well with the exception of the toe, which looked very red and swollen, and presented all the appearances of genuine gout. On the third day, Saturday, this as well as every symptom of sciatica, had disappeared, and the patient began to walk about the housekeeper's room. Eight years have elapsed since, and this person, who is still in the same service, has never experienced an attack of the same kind.

CASE LIV.

Lumbago consequent on exposure to cold and rain.

Mrs. R——, a lady about twenty-two years of age, susceptible of cold, and subject to inflammatory complaints, after a long drive from Barnet in the night of the 5th of July, 1835, in an open gig, during a storm of rain and wind, which blew all the way upon her back, was seized in the night with shivering, general soreness of the limbs, and fever, which induced her husband to call up a medical gentleman near him, in the vicinity of Bryanston square. In the morning, when this lady attempted to sit up in bed, she found it impracticable, and felt as if she were nailed down to the mattress. The slightest effort at a movement produced an agony of pain. In this manner the day was passed, during which the remedies prescribed had caused an abatement of the fever and general indisposition, but had made no impression on the local affection. At night the latter became much exasperated, notwithstanding the application of warm flannels and warm fomentations. Lying immovably flat on the back, which had hitherto been the only position of comparative comfort, became now irksome, and with some difficulty Mrs. R—— was turned on her right side. Cupping was proposed, and even bleeding at the arm, but the patient resisted both, and at the suggestion of her husband assented rather to my being sent for. The written message enabled me to go prepared with an ammoniated counter-irritant, in which I doubled the proportion of the strong *liquor ammoniæ* to the spirituous ingredients; and on my applying the same to the whole of the loins, pressing down the application by means of a long towel fastened round the body, the acute suffering ceased at the expiration of eleven minutes, according to the statement of the husband, who

held the watch. A partial vesication ensued almost immediately; but the patient, soon after I left the house, fell into a profound sleep, and the next morning was able to leave her bed, and come down stairs into the withdrawing room, where I found her.

CASE LV.

Genuine and inveterate Lumbago.

The patient just alluded to, feeling a considerable interest in the case of an elderly woman, Mrs. Taylor, aged sixty-six years, a retired housekeeper of the late Earl of Dudley, who had been bed-ridden at her lodgings in the Edgeware road for several weeks, from a very severe attack of lumbago, became anxious to extend to her the rapid and effectual benefit from the ammoniated lotion, which she had herself experienced in that complaint. Accordingly, on the 21st of August, 1835, Mrs. R—— wrote to request I would visit that patient on her account; and on my reporting that I thought the case was one which would yield to the same application, she determined upon using it herself for that purpose, and did so the same afternoon, in pursuance of my directions. The great wish of the poor patient was to get relieved of the local suffering, which she expressed to be exceedingly severe and incessant. As to the power of moving, she scarcely looked with any degree of sanguine expectation to that,—being at all seasons but a feeble subject. Her wish was gratified, as I learned on the following day, by the result of only one application of the counter-irritant; it however raised a blister which became exceedingly troublesome, owing to the application having been left on till the compress had got dry, and also owing to the infirm and morbid condition of the constitution of the old woman. I attended to the case myself after the first day,—being too happy to share in the work of charity towards a suffering fellow creature; and under my care the extensive ulcerated surface, exactly similar to what medical men will occasionally witness subsequently to the application of a common blister in some peculiar constitutions, healed in the course of a fortnight. Mrs. Taylor, however, long before that time, had regained the power of moving about, and was in the habit of sitting up in her chair during several hours of the day, entirely free from the muscular or lumbar affection.

CASES LVI. AND LVII.

The Author's own case of Lumbago.

In former years, and subsequently to my sojourning in the West Indies as a naval medical officer, I was subject to acute rheumatism, and to that form especially which affects the loins. So often have I suffered from the latter, that the part has become liable to an attack of the complaint in question, if I make but the slightest exertion, either in lifting weights, pulling up a tight boot, or riding a rough-trotting horse. During an attack of the disease, whether

spontaneous or accidental, the pain I experience is not very great, provided I keep the body still; but on attempting to rise from a seat, or to move when in bed, the suffering is very considerable; indeed so acute is it when I try to stand up, that it bends me double; and in that state alone can I walk, while under an attack. Formerly I treated these attacks by internal remedies and by cupping; and I shall never forget the expressions of delight I used to utter, when good old Mr. Mappleston, with *hocus-pocus* dexterity, implanted his exhausted glasses on the painful muscles, and drew them up with irresistible force within the cup, whereby my inward pain would instantly cease. But though momentarily relieved, I never found that the abstraction of blood from the part either permanently benefited me, or hastened the cure of the disease. In 1832 I was visited by a smart attack of spontaneous lumbago, as usual. This time I determined on trying, in my own case, what had so well succeeded in others; and therefore, after the first day of the disease, in which I thought it necessary to employ some general medicine, I put a large compress, with the ammoniated lotion, on the lumbar region, and passing a long towel round the waist, I effectually pressed it down for five minutes. The pain or smarting from the application was such that I missed the original pain at once; but even after the smarting subsided, the lumbago was no longer in existence. Heat and an intolerable itching of the part, during a few days after the application, were the only inconveniences I experienced.

About two years ago I incautiously lifted up a child four years old, stout and heavy,—stooping in the first instance to lay hold of him under his arms, and next rising up suddenly to toss him in the air. As if lightning had struck me in the lumbar vertebræ, a dreadfully acute pain shot through them inwardly, and I was obliged to give the child to another person—not daring to stoop again, and fearful of letting it fall. With difficulty, and much uneasiness, I walked out of the house, and got into the carriage to return home,—on reaching which, so decided an attack of lumbago had supervened, that I could hardly move when I tried to rise from my seat and descend the steps to the pavement. Bent nearly double, and suffering from much pain, I contrived to ascend the stairs to my bedroom, feeling as if I had the weight of the whole house on my back, and as tired in the lumbar muscles as if I had been undergoing the most extreme and lengthened bodily labour. On that evening I had a particular engagement out of doors, which I would not have broken on any consideration; yet to attempt to go in the state I then was would have been ridiculous, even if I could have borne the pain. I therefore determined to try the plan of counter-irritation, which had so well succeeded in the previous instance, and immediately applied the strongest ammoniated lotion I could procure, across the loins, in the same manner as before described. It was then past five o'clock, and I was, as I have already observed, bent double;—yet by seven o'clock I stood erect before the glass to

dress, and kept my engagement half an hour after, perfectly free from every species of pain, but feeling through the evening as if a blister was rising on the part; as proved to be the fact when I returned home.

3.—SWELLED AND HIGHLY PAINFUL ARTICULATIONS NOT DEPENDENT ON RHEUMATISM.

CASE LVIII.

Swelled articulation of the left knee from an accident.

Miss Catherine —, the daughter of a clergyman residing in London, whose constitution is inclined to scrofulous disorders, hurt the cap of her left knee to such a degree, by an accidental fall, that at one time doubts were entertained whether or not that bone was fractured; and the question was left unsettled only in consequence of the rapid and excessive swelling which followed close upon the fall. The surgeon who first saw the patient (10th May, 1831), directed, among other proper measures, the application of a blister. Recollecting to have witnessed the power of the ammoniated counter-irritants in instantaneously raising a blister, when properly managed; at the same time that it allayed pain (of which she was then suffering greatly), the patient requested me to see her. After examining the parts affected, I agreed with her that the case was a proper one for testing the efficacy of the counter-irritants in question, and therefore I could not but encourage her to employ them. Accordingly a compress, saturated with an ammoniated liquid, was placed upon the prodigious swelling at either side of the knee, leaving the hollow behind, and the cap in front, quite free. In less than five minutes the whole interior of the knee joint was thrown, as it were, into a state of commotion. On removing the compresses, large patches of a full vesication appeared to have formed during that short period, and these were left intact. In the mean while the inward pain of the knee, and the excessive tenderness of the cap, had greatly subsided; and the swelling did the same by the end of the following day, when the blisters broke, and the large quantity of serum they contained was discharged. The compresses were repeated once every other day for a week; after which they were discontinued; the part seemingly having returned to its normal state, with the exception of some degree of weakness,—which continued for a short time longer.

CASE LIX.

Accidental injury of the knee, producing a painful and swelled state of the joint.

While I was staying for a few weeks at Nocton, in the autumn of 1832, the private secretary of the Earl of — (now Sir Charles

D—), injured his knee very considerably, by hitting it against the stake of a style while out shooting. By the evening of the same day the knee had become so painful and stiff, that on getting up from dinner, and later still, upon going up to his room, he walked quite lame, and seemed to suffer much. I was requested to look at the knee (it was the right knee), when I found it considerably swollen, painful to the touch, very hot, and bearing marks of bruises on the inside, and all round the inner margin of the patella, or knee-cap. I applied immediately a rag with some of the ammoniated lotion. In five minutes it had produced a blister; but as my object was, if possible, to subdue the swelling at once, knowing well from experience, that if the swelling increased further, or continued long even in its present state, it would be difficult to reduce it, I left the rag upon the part for the whole night. Next morning the swelling had completely subsided, the heat of the part was gone, as was also the soreness, except indeed when considerable pressure was made with the fingers on one or two spots of the inner edge of the knee-cap. There was also a large blister quite intact, and full of a fluid, which was partly gelatinous. This I let out, and the vesication was dressed as usual. In six days from the accident the knee got quite well, although the injury sustained by the soft parts, where the bruises had been received, proved so great as to cause a sloughing of them in the course of that time. To all appearance this accident, treated in the usual manner by leeches, and some cold evaporating lotion, would have proved long, tedious, and troublesome.

CASE LX.

Painful strain of the knee from violent exercise.

Captain R—s, of the Royal Navy, was enjoying, with myself, the hospitality of Mrs. Lawrence, at her magnificent seat, Studley, in September, 1830; when, after two days' shooting on the moors, in the course of which he walked over several miles of ground, one of his knees became stiff, hot, and highly painful, and he was soon disabled from again joining in that sport. Captain R— had annually been subject to precisely the same affection, and from the same cause, on the first days of the sport; and on each occasion the inflammation of the knees had run very high,—as it threatened indeed to do in the present instance. Before bedtime of the same day the part had swollen considerably, the knee looking twice its natural size. The skin was tense, but on pressure one might fancy that a large quantity of fluid was collected within. There was no visible discoloration of the part, the temperature was several degrees higher than natural, and the joints felt so stiff as well as painful, that the patient could not attempt the slightest movement without crying out. I shall now quote the notes I took of the case at the time—premising that, being aware, from previous experience (Cases LVIII. and LIX.), how speedily such accidental

inflammatory affections of the joints, particularly of the knee, gave way to the ammoniated counter-irritant, I proposed to the captain to treat his case with that preparation ; to which he had assented.

"October 7, I applied twice to the knee of Captain R——, which was hot, painful, much swelled, and prevented him from walking, an antidyous lotion, and left it on for three minutes, after which the rag, still damp, was replaced and suffered to remain. It improved the part, took off a large proportion of the heat in it, but raised no blister, nor affected the pain. I repeated this morning (Oct. 8) the application. It occasioned much more smarting than before, but excited no blister, and scarcely touched the pain. In the evening, however, the knee was quieter, considerably reduced in size, so as to appear almost natural, and its temperature lowered to the proper standard. Captain R—— seems quite astonished at the total freedom from any uneasiness in the part, which he has attained in so short a time. He states that on a former occasion, the knee, having become similarly affected from the same cause, while on a visit to his relative at Studley, he was confined by it during a fortnight, under the ordinary treatment.

"Oct. 9. The captain's knee is so perfectly well that he escorted me on foot through the various mazes of this enchanting spot," &c.

SECTION III.

CASES IN WHICH THE CIRCULATION IS PRINCIPALLY AFFECTED.

We have hitherto ranged over the principal and most important disorders of the human frame, affecting the nervous, the muscular, and the tendinous system, which the plan of external treatment I am advocating has fully succeeded in curing, when they were susceptible of cure, or has relieved more effectually than any other plan would have done, when relief only was to be obtained. Of the sixty cases of such diseases, the history of which I have fully detailed, fifty-four belong to the class of those which have been completely cured, and six only have not been cured, but have received a large measure of relief beyond that which ordinary medicines had afforded before. Better evidence of the value and success of any plan of treatment cannot be desired. In the sections that are about to follow, the same train of evidence will be laid before the reader, who will find that the use of ammoniated counter-irritants (65) has been equally, and even more uniformly successful in those complaints which are connected with the circulatory system, or the distribution of blood through the body ; also in those which are of a mixed character ; and lastly in those arising from accidents, hurts, or an ill-conditioned state of the skin.

1.—HEADACHE FROM FULNESS OF BLOOD IN THE HEAD.

CASE LXI.

Plethoric Headache from an overcharged stomach.

A lady whose case of nervous headache, cured by the ammoniated counter-irritants, has already been given (XXXV.), and who has since been in the habit of using those agents in the cure of the same sort of headache among her friends, had, about five or six years ago, a governess in her family, who was much addicted to copious and fast eating, and who had become, in consequence, plethoric, and inclined to fulness of blood in the head. She had, as usual, one day in June, 1833, partaken largely of some wholesome animal food, when she was seized with giddiness, stupor, fulness of blood in the head, throbbing and acute pains in the temples and at the top of the head, in the direction of the great sinus. Her extremities, at the same time, had become colder even than usual, and her whole appearance alarmed the family. Being sent for, I found the patient, a lady about twenty-seven years of age, labouring under a positive surfeit, experiencing nausea, but not positively sick, and exhibiting all the tokens of pressure in the venous system of the brain. The pulse was wiry, and not very quick. She kept her hands on the top of her head, pressing the part with them, for relief from pain, which she assured me was more intense than she had ever before experienced. The course to be followed here was plain enough. To empty the stomach by an emetic would have been the most prompt and effectual mode of solving all difficulties; but then the turgid state of the veins in the head rendered that remedy an unsafe one,—at all events, one not free from risk. To bleed, on the other hand, with a full stomach, was not less hazardous; although a medical man would never hesitate to proceed to such an operation, were he to be called to a case of indigestion from gluttony, threatening the patient with a sudden attack of what the French practitioners have felicitously termed “stomach apoplexy.” In the present instance I adopted the middle course, and applied large compresses saturated with an ordinary ammoniated lotion on the nape of the neck, and behind the ears; while the insteps of both feet were surrounded by similar applications. In the course of ten minutes all cephalic symptoms—the pain, the giddiness, the sense of pressure—had completely subsided; at the same time that the feet became red and inflamed, and the temperature of the lower extremities was changed into one more equable and natural. Having waited about half an hour, to ascertain that no return of the embarrassment in the head took place, I directed a rather powerful emetic to be given, which I found, on my visit the following day, had brought away the entire mass of the dinner, cleared the intestinal canal, and restored the patient to her usual state of health. This accident was a good lesson to the young lady; but as it might

also prove an improper one for her very young pupil, her services were soon afterwards dispensed with ; so that I have never been able to learn whether she has, at any subsequent period, suffered from similar attacks.

CASE LXII.

Periodical plethoric Headache from a mal-distribution of blood.

Miss ———, one of several sisters, who had all more or less suffered, between the age of fifteen and two-and-twenty years, from the ill effects of an unequal distribution of blood, until after their marriage,—has experienced, as they had done before her, during the last four or five years, acute pain in the head every four weeks or so ; the whole system at the same time becoming languid, prostrated, and disinclined to exertion of any kind. The head is the only part which on such occasions seems to be in a state of activity,—which is of such a painful nature, that the patient can neither speak nor bear to be spoken to ; she shuns all association with her family—to whom she is warmly attached, and by whom she is in return as warmly beloved ; and excluding all light from her apartment, is compelled to resign herself to a life of perfect inanition for many days together. The attacks were so numerous as well as severe four years ago, that leeches and the lancet were deemed absolutely necessary ; and those measures did good ; that is to say, they relieved each attack, at considerable expense to the constitution, but exercised no beneficial influence in the prevention of their return. Being desirous three years ago to spare so prodigal and wasteful a remedy, I suggested the use of the ammoniated counter-irritant at the time the plethoric headache was most violent ; and that remedy being applied to the temples and forehead, as well as to the nape of the neck, the effect that resulted was precisely what I had anticipated, namely, a cessation of the pain at each of the applications, and the shortening of the usual period of the attack, from a week or ten days, to two, or at most three days. This has been the case on a great many occasions, and even as late as the months of March and April last.

CASE LXIII.

Congestive Headache of a periodical nature, probably dependent on indigestion.

I shall conclude the few cases of this complaint that I have purposely selected from among patients of every station in life (out of some hundred of which I have a classed register) with the narrative of one furnished me by a foreign ambassador, who, during a temporary leave of absence from his post in this country, and while travelling in Italy about three years ago, had occasion to use an ammoniated counter-irritant of a moderate strength, the prescription of which I had given him at his departure from England.

One of his valets having been reported to the nobleman in question as suffering greatly from intense headache, which prevented his attending to his duty,—a headache, too, said to be most aggravated by the intense heat of the weather at that season of the year (July), His Excellency desired to see the individual, and questioned him on the subject. It appeared that this was a periodical form of headache, which invariably made its appearance on each day as the sun rose in the east, and gradually subsided towards evening, until it vanished quite at sunset. The sufferings were said to be exceedingly acute, and such as to prostrate the patient to that degree, that he became almost powerless. Every means had been adopted by the physician of the family to get rid of this daily unwelcome intruder, but without success. Neither leeches nor ordinary blisters, nor evacuants, nor quinine, resorted to on the supposition that the complaint was aguish, had produced the slightest alteration in the complaint, or in its mode of action; and in that state the patient was when his master examined him. A fellow-servant, who had heard of the external remedy which their master had brought from England, and which was said to possess the power of curing pain in the head or any where else, earnestly solicited His Excellency to try it on the footman. A very able physician of the place being consulted by Count —, on the safety of using such a remedy in such a case, and that gentleman's opinion being favourable to the application of the lotion,—the same was put on the temporal region of the right side, without loss of time, and suffered to remain on for nearly a quarter of an hour, at the request of the patient himself, who held it fast, lest any body should remove it too soon. At the end of that time a very large blister was formed, which discharged a prodigious quantity of serum, so acrid that it scorched the cheek and the whole surface of the arm, over which the serum drained during the deep sleep into which the patient had fallen a very few minutes after the embrocation had been applied. That sleep, by the by, was the first which he had enjoyed for several days during the progress of the disorder. And so far, therefore, the lulling of the nervous pain in the head by the action of the counter-irritant, proved the best soporific. The blister healed like an ordinary vesication; the pain in the head never returned; and the servant soon recovered his natural state of health.

2.—SUDDEN ATTACKS IN THE HEAD. CONGESTION OF THE SINUSES. APOPLEXY.

The examples of headaches from fulness of blood, just now adduced, will naturally lead my readers to expect that the same powerful external remedy which served to cure them would also prove highly beneficial in the more serious attacks of blood in the head, which constitute so important and so fatal a class of disorders of the circulation. Such will be found indeed to be the case. I might bring forward a very large number of examples in support

of the assertion; for the ammoniated counter-irritants, from the instantaneity of their action, are the very agents best calculated to relieve the patient from danger, when something else is required besides the lancet; and my experience in such cases therefore has been very extensive. But I shall select three or four instances only, of individual benefit produced by the counter-irritants in question; in order to show of what a powerful auxiliary we deprive ourselves, if we neglect those external agents, in our endeavours to save the lives of our fellow men, when menaced by a formidable disorder such as is here contemplated.

CASE LXIV.

Case of venous congestion in the head producing convulsions.

A hasty messenger summoned me to a house in Seymour-place, May-fair, on the 22d of April, 1830, to see a child about five years old, of Mr. R——, who had been some days ill with a serious complaint in the head, for which he had received every possible assistance from Mr., now Sir Charles Clarke, and the attendant apothecary. Leeches had been applied in the morning of that day, to endeavour to relieve the young sufferer from a state of coma and pressure on the brain. While the bleeding was going on, it was observed by the nurse, and the watchful and anxious mother, that the child became more and more inanimate, his cheeks pallid, his lips colourless, and the extremities cold. A warm bath was instantly procured, and the child placed in it; the leech-bites were stopped, and the cold lotion removed from the head. Having done this, the affrighted mother sent for the regular attendants, who had already paid their morning visit that day; but at the hour in question the principal of them was not to be found, in consequence of which my attendance had been requested. The child was in a state of collapse, and in the utmost danger. I encouraged the warm bathing as high up as the chest, making the water warmer. The bleeding from the bites of the leeches was arrested more effectually, and I made the child swallow a few drops of æther, followed by hot brandy-and-water. With a view to rouse the brain, I, at the same time, suggested the application of an ammoniated counter irritant, which was sent for immediately from the nearest chemist, and applied over the head as one applies a blister; the apothecary of the family joining me about this time in my attendance. Under the persevering use of these measures the infant finally rallied; and it was remarked that while the ammonia was on the head, and producing a rubefacient effect, the convulsive motions of the limbs, which had formed part of the original attack, ceased. At seven in the evening I revisited the little patient, who was then sitting up in a large bed, and very cheerful, saying he was quite well. On the following day I met Sir C. Clarke in consultation, who proposed that, as the pulse was full, more leeches should be employed. At half after three o'clock in the afternoon, however, having again

been summoned alone to see the child, and finding him labouring under a fresh attack of convulsions, I proceeded to treat him in the same manner as the day before, and the patient once more rallied. In this course I had been encouraged by the candid opinion of my liberal-minded colleague, Sir C. Clarke, who had written to me after my first visit to the child, stating that "my measures had been very judicious;" and it is gratifying at all times to have in one's favour the testimony of a man of such high and well-merited reputation. The case, however, was one which, from the very first, had caused great and just apprehension; and the regular medical attendant, with all his vast experience and success, had never ventured to speak of the result with any degree of confidence. I agreed with him that the frequent repetitions of the attacks rendered the case eminently dangerous, and its unfortunate conclusion proved the correctness of that opinion. Upon examination, although no appearances of venous congestion were found in the brain, yet that it had existed, and had produced pressure enough to give rise to the attacks we had witnessed, and, consequently, to warrant the depleting measures adopted by Sir Charles, was evinced by the condition of the brain itself; as it was found to be in that state which the French have termed, "*ramollissement du cerveau*." The repeated bleeding had in fact removed the venous congestion. I have related this case simply to prove the instantaneous advantage we may derive, at a season of imminent danger, from the application of ammoniated counter-irritants to the head.

CASE LXV.

Another example of vascular fulness in the head producing an acute disease of the brain.

Lady Jane F——, a young child of the Countess of ——, in Eaton place, had been under the care of a neighbouring general practitioner, for what at first appeared to be a mere derangement of the digestive organs, but which soon became a regular infantile remittent fever; and, lastly, assumed the character of an affection of the brain. At this conjuncture (28th September, 1831), my attendance was required. Every symptom perceptible at the time of my visit manifestly showed that acute cephalitis was in progress, and that unless the condition of the brain and its investing membranes was presently relieved, the worst consequences would soon follow.

The most prompt means, therefore, usually adopted on such occasions, consistent with the extreme youth of the patient, and its previously enfeebled frame, were put in action. Among others I may mention that I found great benefit, in diminishing the excessive heat of the head, from holding the latter steadily over the margin of the bed, with a basin under, while cold water was poured from a large jug over the sides and upper part of the head, as a *douche*,—until the temperature had been brought very low. This suggestion I had some years before received from Sir Charles

Clarke. A corresponding improvement followed these measures; but the little patient continued to lie in a precarious state, requiring to be seen twice on that and the following day.

At the expiration of that period, the most formidable of her symptoms, and the febrile excitement in the brain, again returned, and so pressingly, too, that no time was to be lost. As any further bleeding was not deemed a safe measure, a blister was naturally thought of. But how to wait for its effect in any degree of security, during a period of several hours? I explained this difficulty to Lady —, and at the same time informed her of the instantaneous action which might be obtained by means of the ammoniated counter-irritants. As those agents were in a certain measure new to her ladyship, I deemed it but right to explain every thing concerning them to her. She assented to their application, which was carried into effect without loss of time, producing the most immediate and most satisfactory result. The child was declared out of danger that same evening, but the complete recovery from the fever was the quiet work of a few days longer.

CASE LXVI.

Giddiness, with singing in the ears, and other distressing symptoms of fulness in the head.

Lady Augusta W—, from causes which it is unnecessary to enumerate, was seized, one morning in May, 1831, with giddiness, which lasted from breakfast-time till late in the day, and made it quite unsafe for her to stand or walk alone. Some appropriate medicine was taken, which seemed to have produced a good effect. On the succeeding day but one, her ladyship awoke with loud and incessant singing in the ears, which became quite distressing, and lasted the whole day. On the morning of the fourth day, her waking was followed by the same symptoms, and she was again giddy on moving. In this unpleasant state she continued for nearly a week, when, beginning to feel alarmed at the symptoms, she required the advice of her physician-accoucheur, who declined bleeding her, for particular reasons, but proposed her living low, and repeating the medicines she had already taken of her own accord. For three more days her ladyship bore the unmitigated symptoms of distress in her head; until at length, having accidentally heard of the good effect of the ammoniated counter-irritants in all cases of fulness in the head, she desired my attendance. After having informed myself of all the preceding features of the case, I used the external application in question, and the sensation of giddiness, as well as the singing in the ears, completely disappeared in half an hour. The lotion was applied behind the ears and between the shoulders, and no blister followed.

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CASE LXVII.

Apoplexy: instantaneous rally during the period of coma and insensibility.

The Hon. and Rev. William —, whose family I had for many years attended, and who had himself been for many months under my care, in consequence of protracted illness of mind and body, arising from affliction and an irregular mode of living, was seized with an apoplectic fit, of great severity, on Sunday, April 25, 1830. I arrived at his residence soon after, and found him in a state of profound coma, with loss of sensibility in every part of the body, short nervous breathing, flow of saliva out of each corner of the mouth, and that species of equine puffing, or snorting, which so peculiarly distinguishes certain species of apoplectic seizures. Mr. Campbell, a neighbouring surgeon, had been summoned, and had bled him to thirty-two ounces; besides which he was in the act of applying leeches when I arrived. I remained three hours by the bedside of the patient, with the pulse in my hand, judging by it of the propriety of prosecuting further the system of depletion. He had had two regular fits. The head was inclined to the left side; the left arm was paralysed; and the convulsive movements of the face, neck, chest, and right arm, were very considerable. He was again bled to the amount of ten ounces, three successive times during my stay in the house—the two last in anticipation of a fresh-coming fit. In the two intervals between the bleedings, the action of the heart became feeble. Sulphuric æther was administered during the one, and brandy and water during the second. At length, having reason to think that the charge in the vessels of the head had been greatly lightened, and finding a sort of collapse generally to be coming on, I covered the whole of the scalp with a compress, saturated with pure ammonia—the only counter-irritant at hand—and applied the same simultaneously to the feet. This treatment shortly recovered the patient, who became sensible from that moment, and swallowed some pills I offered to him. He afterwards entered into conversation with me, and observed that he “was then suffering from violent headache, but that as he was perspiring, he presumed it would do him good.” He perfectly knew me for a short time, but not so during the whole of his conversation. The speech was much affected, and the left side of the mouth drawn up; but reaction had taken place, and the recovery from the attack was complete. This I attribute to the instantaneous and extensive cauterisation produced on the scalp.

CASE LXVIII.

Apoplexy.

I might cite in this place, did I not fear to overburden the volume, two other extreme cases of apoplexy, for one of which I was sent for express to Southampton, on the 16th of April, 1831. In that

case, after the rally of the patient from coma, and a state of great oppression, by means of ammoniated counter-irritants—a state which had continued, notwithstanding the proper measures adopted by Mr. Maul, sen., including venesection—I brought him to town with me, and had occasion to remark, during the journey, that whenever he attempted to speak he could only pronounce the half of each word, and spoke like one who has been suddenly awakened from a profound sleep, and who neither knows what he says, nor comprehends what is said to him. In this case the triumph of the ammoniated counter-irritants, applied either as rousers of energy in the neighbourhood of the head after bleeding, or on the lower extremities as revulsives, was most complete; for not only did the patient, then seventy-five years of age, recover quickly, but he has never experienced another attack of the same formidable complaint since.

3.—SORE THROAT. INFLAMED TONSILS. CROUP. WHOOPING-COUGH.

In all these modifications of membranous, as well as substantial inflammation, blisters are well and generally known to be of infinite service. The more sudden and acute the attack, the greater the relief, and the more certain the recovery, provided blisters be applied immediately, and strong enough. But their agency, in all such cases, is really as nothing, compared with that of the ammoniated counter-irritants. Indeed, it might be said with justice, that in as much as an ordinary blister takes, we will say, eight hours to produce its complete sanative effect through two or three stages of counter-irritation—whereas the ammoniated counter-irritant produces the same effect, through the same stages, in less than half an hour; it follows that their relative virtue, in the cure of the diseases under consideration, may fairly be stated as one to sixteen. This superiority, which will be seen fully exemplified in the history of the cases that follow, has been of immense advantage to me in practice, during the prevalence of sore throats that in so special a manner marked the two last winter seasons in London.

CASE LXIX.

Repeated and severe Sore Throat.

No one is more liable than the author of these pages to what is commonly called a sore throat. At all times, and under the slightest exposure to a damp winter easterly wind, or to a sudden alternation of heat and cold, the throat being then not more than usually clad, a regular inflammation of the lining membrane of the upper part of the trachea and œsophagus, and presently also of the tonsils, is set up, which will run into fever and general disturbance of the constitution. Before he became aware of the powerful agency of ammoniated lotions, the author treated himself in the ordinary way,

and was, in consequence, kept away from his avocation for two or three days at every attack; but as soon as experience had taught him how much more quickly such cases could be disposed of by those counter-irritants, no attack of sore throat in his own person has been suffered to run on beyond the first manifestation of soreness and inflammation. The last occasion on which the external treatment was adopted, in preference to any other medical treatment, was in the spring of 1837, when almost every body complained of sore throats, and the town was rife with cynanche trachealis, laryngitis, bronchitis, and tonsillar swellings. On one particular evening, in the month of April of that year, the author was exposed to a damp easterly breeze, while driving in an open carriage to the eastern extremity of London. In the course of the night there had been restlessness, want of sleep, increased heat, and, by the morning, fever. The back ached, the limbs ached, the head ached; in fact, every symptom denoted a severe catarrhal complaint—but the worst symptom was an almost total inability to swallow liquids without excruciating pain. By remaining in bed in a state of perspiration until two o'clock in the afternoon, drinking diluent and diaphoretic draughts at the same time, the febrile symptoms subsided; but the soreness, nay, the absolute pain in the throat augmented. At three o'clock, it became indispensably necessary to keep an appointment out of doors. A compress, consisting of two layers of flannel immersed in an ammoniated lotion, of a strength proportionate to the intensity of the symptom, was put round the front part of the throat like a collar; and lest the pain, which the application was likely to produce, should induce the author to tear the compress off before the full effect had been produced, a silk handkerchief was tied over it. In two minutes the smarting caused by the application had become terrific: it was almost like what a red-hot iron might have been expected to produce. The lotion nevertheless was kept on for five minutes more, when the trickling of a quantity of serum along the side of the neck showed the formation of a blister, and the compress was removed. The inward soreness was gone—absolutely dispersed. A large draught of warm water was swallowed in sips, as well as in gulps, in order to test the soundness of the recovery, and no uneasiness whatever ensued; in fact, the disease was no longer in existence, and the author was able to keep his appointment.

CASE LXX.

Sudden and severe inflammatory Sore Throat.

A gentleman connected with a banking establishment not many minutes walk from Whitehall, came to me from his residence near Portland place, on the 7th of July, 1835, complaining of sore throat. On examining the back of the mouth, I found that part highly inflamed, the right tonsil much enlarged, and deglutition difficult as well as painful. He had had the sore throat for two days, during

which he had been advised to use gargles of port wine, hartshorn liniment, purgative medicines, &c. but without any benefit. The complaint, on the contrary, had become at last so troublesome, that he determined on having my advice. I made the patient sit down and remove his cravat, after which I applied a compress with an ammoniated lotion on the right anterior side of the neck, two inches one way by four inches the other. I held it fast on the part for two minutes, at the expiration of which time a full blister of the same dimension had risen, which throughout the day discharged very abundantly, and all vestige of the complaint was gone before the evening. From my house the patient went to his office, to attend as usual to his occupations, and suffered no further inconvenience, though he complained much of the smarting of the blister.

CASE LXXI.

Acute and sudden Sore Throat.

Sir Charles D——, who had often consulted me on account of his health and that of his lady, and who was well acquainted with my notions and practice respecting sore throats, met me on the 13th of July, 1836, in the street, and informed me that on “the Friday previous, the 8th instant, he had suddenly awoke with a dreadful sore throat, so painful, and at the same time so choking, that he thought he was going to be suffocated. He instantly got up, applied a compress saturated with an ammoniated lotion I had recommended to him on a previous occasion (Case LIX.), and went to bed again. It raised a blister in a moment; but he went to sleep notwithstanding, and upon awaking in the morning the throat was quite well.”

CASE LXXII.

Severe Quinsy.

The butler of Mr. Dav——t, a gentleman residing in the North of England, was attacked in the autumn of 1837 with the severest form of quinsy, which threatened suffocation, and prevented the deglutition of even the smallest particle of liquid, without producing pain and an inward convulsion. A lady,—whose case of violent sprain from a fall, cured by counter-irritation, will be found related in its proper place (Case XCII.), and who was familiar with the use of the ammoniated counter-irritant, one of which she always had with her wherever she went,—was at the time staying on a visit in the house, and being solicited by her maid to spare some of that preparation for the patient, who was supposed to be in a dangerous state, she acceded to the request. The counter-irritant was in consequence applied to the throat the same evening, and in the course of the night the disease completely disappeared,—a blister having taken place, notwithstanding which the patient was able to resume his active duties on the following morning. This information the lady in question, Mrs. H——, gave me of her own accord

on the 20th of May of the present year. Apparently the disorder in this instance must have been in its first or active state of inflammation; for if suppuration had already taken place the counter-irritant would not have had the effect it had. And here it is that I must repeat how necessary it becomes, in using such agents, to know precisely the condition of the parts, also the degree of susceptibility in the skin of the patient,—so as to be able to determine beforehand the relative proportions of the ingredients so often alluded to in the composition of ammoniated lotions or embrocations.

CASE LXXIII.

Croupy Sore Throat and Earache. (Cynanche Trachealis and Otitis.)

Mrs. A——e, aged twenty-five years, residing near the Cambridge and Oxford terraces, Edgware road,—a lady much disposed to plethora, from which she was fortunately relieved by natural efforts,—had occasion one evening, for particular reasons, to put her feet in warm water before she retired to bed; and she fell asleep in that position, after having dismissed her maid for the night. How long she slept she knew not; but on waking she found the water perfectly cold, and felt her feet quite chilled. In the night a sudden suppression took place, shivering followed, with subsequent restlessness and feverish heat; and by morning a regular attack of cynanche trachealis, or croupy sore throat, had come on, accompanied by severe pains in both ears, and general fulness of the head. This occurred on the last day of January, 1831. For four or five days this lady was placed in considerable danger, being threatened at times with suffocation; and I found it necessary to visit her three and four times daily. After copious bleeding, both general and local, and the use of the medicines generally administered on such occasions, the constitutional symptoms of the disease subsided, but not the local pain and inflammation, or rather the feeling of painful strangulation; for it was more that, than any positive pain she experienced. On the fifth day of the disease, finding that we were not gaining ground, and the apprehension of the patient in the absence of her husband and of her friends, becoming more and more urgent, I proposed to apply a large compress with some of the strongest ammoniated counter-irritants, the nature of which, as an instantaneous blister, I fully explained to the patient. The application took place at once; in less than twenty minutes the whole of the throat was enveloped in one mass of prominent vesication; and the result was that the patient derived an almost instantaneous as well as permanent release from all the most distressing and urgent symptoms of the complaint. The blister healed without difficulty; but the place to which it had been applied exhibited for two or three years afterwards, a red mark, whenever the lady flushed. That mark has since completely disappeared. It is worthy of notice (although I do not profess to draw any conclusion from the fact) that Mrs. A——e has never had a sore throat since. The sup-

pressed function produced by the immersion of the feet in cold water, which had been the cause of the attack in the throat, was not restored until the expiration of another month.

CASE LXXIV.

Croup in a child seven years of age.

The young son of a physician in good practice, whose health had not given the slightest indication of forthcoming disease, was heard one morning by his father to fall on the floor in the nursery overhead, at the same time that a loud scream of alarm was uttered by the nurse. In an instant the father was by the side of his child, whom he found in the nurse's lap, black in the face, breathing hard, and with a stridulous whistling sound, apparently overcome by an attack of blood in the head. While a lancet was being fetched from below, the nurse stated that the child had only a few minutes before had a sudden attack of cough, of the most violent description, accompanied by a peculiar noise which she had never heard him make before; and that after a minute or two of such incessant coughing, and while in the act of walking towards her, he had fallen in a fit. The jugular vein was opened; the flow of blood relieved the head, and the child was able to raise it and to look up. The face became less ruddy, or rather less black; but the lips continued of a purple hue, and the breathing was rather more stertorous than before. The vein of the right arm was now opened, and ten ounces more blood were taken away. Respiration and the heaving of the chest were relieved by this; but presently a paroxysm of cough came on, which was nigh throwing the little patient back again into all his sufferings, and from which the father learned the true nature of his child's sudden indisposition; for the peculiar and characteristic sound of the cough proclaimed it to him as croup. My assistance at this time being requested, I recommended a strong ammoniated counter-irritant to the throat, in front as well as behind (avoiding the opening made in the vein), in order to check, by revulsion, the rapid accumulation and deposition of lymph on the tracheal membrane: and I recommended further that the application should be permitted to remain long enough to blister the whole surface. While the compress was on, another severe paroxysm occurred, which convinced me also of the nature of the disorder. The paroxysm was as violent as if no previous bleeding had taken place. It lasted a minute or two; and the father doubted whether the cold of the lotion, when first applied, might not have provoked this fresh attack. He relied, however, entirely on my experience in such an external treatment, and suffered the application to remain on until the full effect on the skin had been produced. As soon as the compress was removed, and rags dipped in hot water had been applied in its stead, the child fell into a profound sleep, out of which he awoke, apparently quite well. Cough came on again in the course of the day, but not of a croupy nature; and the little fellow recovered most completely in two days.

The rapidity of the cure in this case must not surprise. In its destructive agency croup is equally rapid; and the development of an external inflammation that shall instantly check such a disease, through the instrumentality of an energetic counter-irritant, is not more wonderful than is the sudden and spontaneous internal inflammation, which constitutes the disease itself, and often destroys its victim in four-and-twenty hours.

In my note-books I find recorded the histories of several cases of obstinate whooping-cough, which, after reaching a certain stage, had given way to the same external agency, with a facility that would have surprised many not fully conversant with the action of counter-irritants. But I forbear burdening my volume with any examples of that disease so cured; because the nature of the disorder is so simple and so well understood, and the probable good effect of external counter-irritants in their treatment so generally admitted, that I could not invest the cases themselves with any degree of interest. Thus far however I will say, that if applied in time, and of proper strength, a counter-irritating ammoniated lotion, used externally, and the prussic acid employed internally, will cut short almost every case of whooping-cough, in the course of the first few days from the original invasion of that disorder.

4.—EARLY INFLAMMATION.

* *Of the Bronchia.*

CASE LXXV.

Bronchitis, or bronchial inflammation, with loss of voice, and minute ulceration.

In this case the patient, an unmarried lady, the sister-in-law of an Irish baron, after a very severe attack of catarrh, lost her voice entirely, and began to complain of uneasiness in her throat. There was no difficulty of swallowing, no enlargement of the tonsils, nor any evidence of inflammation in the visible portion of the back part of the mouth. But on being made to draw in a deep inspiration through a small quill, a hectic cough was instantly set up, which sounded like the wind through a broken reed. Cough would also come on spontaneously, and very frequently through the day; and when, after a violent paroxysm, the patient attempted to speak, hardly a syllable of what she uttered could be heard at the distance of a few feet from her. At one time I succeeded, without exciting immediate coughing, in holding the tongue down with the handle of a spoon, and making her take a deep inspiration, so as to detect, near and about the glottis, a number of very minute spots, smaller than millet seeds, resembling ulcers. As every means suggested by an able country practitioner had been adopted before my arrival from London for the purpose of consultation, I had nothing left to pro-

pose but counter-irritation, with the view of overcoming in good time the morbid condition of the bronchia. Accordingly a lotion of that nature was prescribed, and ordered to be used for a few minutes every day; which having been done for the space of six weeks, the disorder was successfully conquered.

*** Of the Lungs or their membranes.*

CASE LXXVI.

Pneumonia.

On the 27th of April, 1837, a lady, 47 years old, the mother of seven children, was attacked with severe pneumonia, after exposure to cold in a light evening dress. There was acute pain in the chest, through and through, as she expressed it; great febrile excitement; cough, attended with general uneasiness and heat in both sides of the thorax; fever, pain in the head, and great soreness of the bones of the face. The pulse, at the same time, was full. Of this particular form of pneumonia, a great many cases had occurred, during that season in London, and many patients had died of it. It was a singular and a distinctive symptom of that species of complaint, that the bones of the face were positively painful to the touch in all their parts. The fatal conclusion of an attack of this kind, within two days of its first coming on, under circumstances of exposure to cold, somewhat similiar to the present, in the case of a favourite daughter of William IV., was just then the topic of general conversation, and my patient felt great alarm at her own situation in consequence. I proposed bleeding in the first instance, and next blistering the chest with the instantaneous blistering ammoniated lotion. Some reasons, however, were urged, why bleeding should *not then* take place; and I was compelled to give way to prejudice. But the counter-irritating lotion was readily assented to. It was applied in my presence, and kept on firmly for five minutes; producing in that time most ample and complete vesication; during which the pain in the chest, that in the cheek-bones, and in a great degree the one in the head also, disappeared and did not return. In two days more of ordinary treatment the patient recovered her usual state of health.

CASE LXXVII.

Incipient Pulmonic Consumption.

Miss Charlotte —, a tall, young, and well made person, who had reached the age of twenty-four years, without any serious ailment, and who belonged to a family free from all hereditary disease, was attacked with an inflammatory complaint in the chest, while out of town, which confined her to the house the whole winter. In the following year a similar attack came on, which

lasted somewhat longer, and was got rid of in the same way as before. She had a third time a similar attack in the winter following, after which she found herself so much reduced that she was brought to London for consultation. The opinions given as to her real state varied considerably; but, from the complexion of them all, it was evident that incipient consumption of the lungs was the prevailing idea formed of her disorder, by almost all the physicians who had seen her. When it came to my turn, I found the evidence for such an opinion to be so strong, that it was impossible not to adopt it. I confirmed it therefore, though in a guarded way, by my own statement, and when I was asked what I should mostly rely upon to prevent the probable evil results that were anticipated, I replied "counter-irritation." I had at that moment two other patients, declared by all the faculty to be consumptive, who were deriving great benefit from counter-irritation: the one a young gentleman, who had a seton in the left breast; the other a man more advanced in years, who had on perpetual blisters. I could not therefore recommend any thing more promising than the plan of counter-irritation. For the common perpetual blister, however, I substituted an ammoniated counter-irritant, one of which was applied three times a week. This practice was continued for the space of six months, at the end of which time Miss Charlotte — was so much better that she was allowed to join a party traveling on the continent. There she remained three years, improving in health; but whenever pain under the breast-bone, or on either side of the chest, came on, she was obliged to have recourse to the ammoniated lotion. I not long ago saw her, on her return to England, looking as well as possible; being now free from pain, from cough, from purulent expectoration, from hectic flushes, from fever, and in excellent spirits. Still she is even now compelled to resort to her counter-irritant, the moment she experiences any pain under the sternum.

*** *Of the Heart or its coverings.*

CASE LXXVIII.

The Author's own case of Pericarditis.

On Wednesday, the 19th July, 1837, I attended her majesty's levee, which was crowded to excess, so that at one time the heat of the apartments had become almost intolerable. Many, besides myself, were in a state of perpetual and profuse perspiration.

On reaching the door which leads to the middle room, and which, on that day, was closed so as to admit only fifteen or twenty persons at a time, I found myself ensconced in the recess of a neighbouring window, the lower sash of which was partially thrown up, perhaps as high as two feet. The wind whistled through this opening, and blew upon the left side of those who stood before the window, with their faces turned towards the door. I recollect that,

among the group, there was that most amiable and young looking prelate, the late Bishop of Chichester, who held in his hand an address from the clergy of his diocese, and who expressed how refreshing the coming-in breeze was to him. Not so with regard to myself, who felt chilled by the draught. An instinctive horror at the effects it might produce, made me gather up my clothes, and press the flat hat closer than before to my left side, in order to protect it from the draught.

The perspiration however was checked, although our peculiar position continued but for a few minutes. On the evening of the same day I began to experience some rigours, and great restlessness, my breath became somewhat short, and I felt altogether very unwell. I retired to bed early; but the night was unquiet and agitated, and I dreamt of a severe pain in the left side, just about the place on which the wind had blown in the morning. On waking I found that I had really a severe and deep-seated pain in the left side of the chest; and I got out of bed with some degree of anxiety. I had scarcely reached the dressing-room when the pain increased, and fainting supervened, which barely allowed me time to pull at the bell before I was compelled to stretch myself on a couch. Some stimulating drops were administered, which rallied me for a time, but only to be sensible of an increase of pain in the region of the heart, accompanied by great tumultuous action of that organ, producing great anxiety, and difficulty of breathing. I attempted to take a deep inspiration, but it threw me into a still more violent pain. I felt my pulse, but it gave no comfort: it beat irregularly—it was alternately full and wiry—strong and feeble. Anxious to shake off apprehension, that I might not unnecessarily alarm my eldest daughter, the only one of the family then in the house,—I endeavoured to rise from the couch; but scarcely had I gained my feet than fainting came on again, and I sunk back in the horizontal posture, calling out for some person to be sent for to bleed me. Such is the constitution of this great town, that although the most pressing messages, written as well as verbal, implying great danger, were sent in all directions near us, to all of which that waiter-like unmeaning reply “coming” was sent,—no one in reality came. Yet it was only nine o’clock in the morning, and the medical men, the apothecaries, and the chemists are in abundance in my neighbourhood. Still no one was coming. The case must soon have become desperate. I was perfectly collected notwithstanding the increasing agony of the deep-seated pain, which extended from the front to the back, through the heart, and down the left arm. My only apprehension was, lest inflammation being once suffered to be established, either in the heart or the pericardium, bleeding might prove too tardy a measure to save me from the remote evil consequences of that disease. A young gentleman appeared at last, after the lapse of nearly three quarters of an hour from the first seizure, sent by my kind friend Mr. Tupper of Burlington street,—who, at the sight, I suppose, of my pale counte-

nance, hesitated to bleed me, and did it in great trepidation to the extent I indicated. The relief I experienced, after three cupfuls had been abstracted, is not to be described; the sensation was a luxury, and I wished I could have perpetuated it.

It stilled the tumultuous throbbings of the heart, it restored regularity to my breathing and to my pulse, it cleared away the oppressive cloud of fear and apprehension (heightened not a little at the sight of the only child then under my roof), and altogether it made me look upon the youthful operator as my saviour. But the pain continued yet in its place; it was as if a sharp instrument had penetrated the heart. That organ had evidently been relieved from the oppressive currents of blood by the operation; but inflammation, either of its structure or of its coverings, must have been in active progress, and might still extend to an unmanageable degree, unless speedily checked. I therefore saturated a white pocket handkerchief, doubled in the usual square manner, with a strong ammoniated embrocation, and applied it to the region of the heart where the pain was situated. I did a similar thing with another handkerchief, and applied it simultaneously to the back, below the margin of the left shoulder blade. These I kept on until both surfaces became as it were red hot, and burned vigorously. In proportion as these effects were produced, the inward pain or stab-like feeling decreased, until at last it completely subsided and passed away. I dressed in an hour after, and drove out in the carriage to my usual avocations for the rest of the day, without the smallest inconvenience. The pain never returned. In the evening I found a slight blister on the chest and none on the back; and the next morning, on inspecting the third cup of blood taken from the arm, it appeared opalescent on its surface, and covered by a slender film of coagulated lymph.

No question but that all this tempest had had its origin in my exposure to the draught of wind from the fatal window, and the sudden check of perspiration which followed. I say fatal window with too much truth; for, of the others who had been like myself exposed to its draught, one there was who little thought that, on the fourth day from that occurrence, he would cease to be reckoned among the living. The fate of the amiable prelate mentioned in the early part of this narrative is well known. He returned on the day after the levee to his bishopric; was taken ill with an inflammatory cold, they say, in the night of Thursday; and expired on the succeeding Sunday in his episcopal palace. I have no hesitation in stating, that I attribute my safety not so much to the bleeding as to the counter-irritant I employed on the occasion, endowed with such instantaneous and energetic power.

I might easily multiply evidence to prove the immediate good effect procured by ammoniated counter-irritants, in cases of other forms of inflammation, especially of the abdomen; among which the case of a physician to whom the profession is much indebted for many ingenious mechanical contrivances, as auxiliaries to

medicine, might be cited. In his case a protracted and serious attack of entero-mesenteritis was greatly relieved by the application of those powerful agents. But it would lead me to an endless task, were I to add to what I have already advanced, in support of my statement of the excellent effects to be obtained from such counter-irritants, in all diseases in which the circulation is principally affected.

SECTION IV.

CASES OF DISEASES OF A MIXED CHARACTER.

In this section I propose to illustrate, by means of four or five very striking examples, the power of the ammoniated counter-irritants over certain diseases, which I have classed under one general denomination of "diseases of a mixed character," simply because I am not able to define their real nature with more precision. In this I am not singular; since every body will agree that while treating of gout, which is one of the diseases in question, or of the various forms of palsy, which is another of the diseases in question, the medical profession cannot advance, nor has it ever advanced, any thing beyond mere conjecture, respecting the true origin or cause of those maladies; or indeed stated with distinctiveness in what they consist. Wishing then to avoid every species of error into which I should have myself fallen, as well as have led my readers, had I attempted to specify the real character of gout or palsy, by classing either of them under a more distinct head, (as I have hitherto done with regard to those other diseases of which an illustrative account has been given in this volume,) I have adopted the "mezzo-termine" at the head of this section, to signify that the complaints therein treated are of a nature not easily defined.

Let us look to gout, for example, and see whether or not what is here advanced on general grounds is not truly and immediately applicable to that particular complaint. Who can say that gout is essentially a disorder of the nervous system, or of the muscular, or of the tendinous tissues, or in fine of the system of circulation? In that disease we have pain, and a very acute one; but is that a sufficient reason for concluding that the disorder has its origin in the nerves—the only *sentient* organs in the body? There is also enlargement of the parts, thickening of the muscles, stiffening of them likewise, and inability to move them. Are these reasons enough for imagining that in the muscular system resides the true seat of gout? Again, we often notice very considerable and always some inflammation in the part affected by gout, great redness, throbbing, and increased heat; all which phenomena belong to

disturbed and increased circulation. But are these good and substantial grounds for considering gout as a disease of the circulating system? Nay, we occasionally witness a sudden transference of the acute suffering of gout, with its concomitant signs of inflammation and pain, from its more usual seat, the extremities, to some important internal organ. Is such a phenomenon, which in ordinary circumstances we should look upon as a phenomenon of circulation, to be considered as further marking the correctness of those who are disposed to view gout as a disease of that function? We should not reason philosophically were we to adopt any such conclusion; for if, as Mr. Swan in his able work on diseases of the nerves has observed, pain be conveyed from one place to another, entirely by the nerves, and not at all through any other medium—the mere sudden leaps which *erratic* gout-pain often takes, will not necessarily imply any agency of the circulating system. With respect to the latter observation of Mr. Swan, some of my readers, who may have smarted under this troublesome disorder, will be inclined to ask, if the pain in the original seat of the gout, and the pain manifested in the new seat to which gout may have been suddenly transferred, are to be assumed as indications of suffering in the *nerves* of those respective parts, why is no pain experienced by the patient during the transference of the disease from one seat to the other, along the course of the nerves which keep the two seats in communication with each other?

Would not this total absence of pain in the intermediate course, my readers might further enquire, denote rather, that the transference of the disorder has been effected through some other channel than that of the nerves? and that the channel in question is probably the circulation? The phenomenon of pain shifting suddenly from one place to another, is one which we have not yet made out. "It would be interesting," remarks the same respectable authority just mentioned, "to know by what course pain is conveyed from one part to another; but this investigation is attended with considerable difficulty." And so is the whole question of gout, which remains as much unsettled now, as it was in the times of Sydenham, one of its greatest martyrs—and as it was long before him. In classing, therefore, my examples of gout under the head of "Diseases of a mixed character," I avoid both Scylla and Charybdis, and try to steer clear in mid-channel.

In reference to paralytic affections, I admit that the same degree of indecision as to their parental source, does not exist. Pure, genuine palsy is unquestionably a disorder, the true nature of which modern physiologists and pathologists appear to have made out almost to demonstration. But it is not so with regard to such paralytic affections as are here illustrated by examples of recovery, through the action of counter-irritants, and which are so mixed up with other derangements of the constitution, that it is difficult to discern which is the parent disease and which the offspring. Under these circumstances, I thought I could not do better than to associate

such affections, with gout, under one denomination of "diseases of a mixed character;" and I hope that what I have done for the sake of convenience, will not be imputed to me as a mark either of ignorance of what is at present known on the subject, or of presumption in wishing to introduce new distinctions in the methodical arrangement of diseases.

The first form of disease under the present head, which I shall illustrate by three examples, is suppressed gout: or, as it has also been called, *repercuted* or *metastatic* gout—according as it has, or has not, made its appearance in a part of the body different from the one in which it originally appeared, and which it has abruptly left. This is unquestionably the most dangerous form of gouty disease; and it is so because, when the malady has suddenly deserted its post, none can predicate in what other more important part of the human frame it may not take up its quarters, either immediately, or at no distant period. The parts principally liable to such visitations, under the circumstances here alluded to, are the heart, the stomach, and the head; of each of which visitations I shall here give a single example, to show, first, their extreme danger; and, secondly, the immense assistance to be derived in such cases from a proper use of strong ammoniated counter-irritants to meet that danger.

1.—SUPPRESSED OR REPERCUTED GOUT.

* *Affecting the Heart.*

CASE LXXIX.

On the 31st of May, 1831, I was hastily fetched away from home at an early hour in the morning, by one of the servants of Lord —, living not far from my house, and who was said to be dying. On entering the drawing-room, I beheld the patient reclining on the back of a large arm-chair, apparently in a lifeless state, his right foot, covered by sundry flannel wrappers, resting on a stool before him. On approaching him to lay hold of his hand, I could hardly distinguish the act of respiration. The face was of a livid hue, and the heaving of the chest took place at singularly large intervals. No pulse was found at the wrist. I applied my ear to the region of the heart, but no distinct pulsation could be made out. That organ was in action still; yet its movements more resembled a tremour or a fluttering, than any distinct vibration. I called for wine and brandy and hot water instantly, while I stripped the wrappers off the foot. On the latter being uncovered, the whole secret of this awful state of the patient was made apparent. Lord — had, for some days, been suffering from an attack of gout in that foot, to which disease he was frequently subject. On that morning particularly he had complained to his

valet that the part was excessively painful and inflamed; and he had, in consequence, repeated the dose of colchicum, which his lordship, of his own accord, used to prescribe for himself in these attacks; for he had seldom consulted any medical man for the complaint. Thus far the servants knew. One of them also stated, that as he came into the room with some message, he had found his lordship in the state I then saw him; in consequence of which he had fetched me to him.

How long their master had been in that condition they could not tell; but it could not have been long; for one of them had had occasion to enter the room half an hour before, and his lordship was then engaged in writing some letters, with his foot placed on the stool. That foot appeared now cold, of a bluish livid tint, the surface of the instep flaccid and rugose, as if the skin had collapsed, after having been extensively stretched, and no symptom of active disease was upon it. While listening to this statement, I was engaged all the time in affording succour to our patient, who, to all appearance, seemed insensible to what was going on around him. The necessary articles being brought, I forced down the throat a large portion of a tumbler-full of a mixture of wine and brandy, made hot with boiling water; at the same time, flannels, burning hot, and rapid frictions, were applied to the foot, while one of the strongest ammoniated counter-irritants was sent for. The first portion of the stimulants was presently rejected from the stomach, and a like quantity poured down into it, equally warm. The counter-irritant arrived, and it was put on the whole of the instep, by means of a very thick compress, which was bound tight round the foot by a handkerchief. Again the stomach rejected the brandy and wine, and again I reiterated the dose. Three more minutes elapsed, and the pulse rose under my fingers. A fourth time the stimulants were rejected, and a fourth time repeated, and now reaction had so far taken place, as to induce Lord — to exclaim that his foot was burning. Finding him sensible to what was then going on, I enquired how he felt, and whether he had been aware of the state he had just emerged from. His reply was, that being in the act of leaning forward to write a letter, and while stooping to pick up his pocket-handkerchief, a sudden pain had seized him in the heart, the gouty foot ceasing at the same time to pain him, and that he felt as if he were dying, and fell back in his chair; in which position he remained until his servant first, and afterwards all of us together, had entered the room; of all of which he was quite aware, though he had no power, by tokens, words, or movements, to signify the same. He now complained bitterly of the sensation in the foot, and that he could not bear it any longer. It was worse than gout. I explained the nature and the intention of the application, and requested it might be suffered to remain until I found the pulse to my satisfaction. This was not long in being the case. The arterial movements at the wrist became distinct, strong, and regular; general excitation of the system ensued,

the face regained its natural colour, the skin acquired throughout a considerable degree of heat; and lastly, when the compress was removed, the foot was found swollen, red, hot, throbbing, and in the condition in which it had been early in the morning, before the patient had taken his doses of colchicum. All these events and operations occupied half an hour, and I had the satisfaction, at the end of that time, of leaving my patient in perfect safety, with his morbid companion, the gout; on which he was now almost inclined to look with feelings of friendship. What measure of assistance is to be ascribed to the ammoniated counter-irritant, in bringing back gout to its old quarters, and in arresting the ebbing of life in a patient so situated, at the age of seventy-nine years, I leave my readers to determine. The lesson in reference to colchicum drinking, as a relief from gout, was not lost on his lordship, and well it has been for him that he profited by it; for in the seven years that have elapsed since, instead of a fit of the gout every six months, as was the case before, Lord — has had but five attacks altogether, all of which he has allowed me to manage. Few persons at the age of eighty-six years, can enjoy easier health than his lordship, or boast as he may of the keen retention of some of the best and most striking faculties of the intellect.

* * *Affecting the Stomach.*

CASE LXXX.

A gentleman liable to gout, both through inheritance and an irregular mode of living, who was in the habit of taking Wilson's mixture during the paroxysms of pain, and seldom paid much attention to the rules of diet laid down by his medical friends, after a severe attack of the disease in both wrists, which had continued some days, was suddenly seized, on the 15th of September, 1830, with a spasm at the pit of the stomach, which lasted, by intervals, for the space of three hours, and during which the wrists ceased to give him pain. A friend who happened to be present, and who had been a patient of mine, instantly sent for me; but I could not reach the house before the lapse of time last mentioned. The sufferings of the patient seemed very great, and to require immediate assistance. I prescribed a strong mixture of volatile aromatic ammonia, with tincture of senna and rhubarb, and twenty grains of carbonate of soda. The relatives present were urgent for the addition of some laudanum, but I explained the danger of such a proceeding, under the circumstances of the case. In ten minutes there seemed to be an abatement of the spasmodic action in the stomach. No change, however, had taken place in the appearance of the wrists, and as long as that was the case, I relied but little on the permanency of the relief obtained in the stomach. I called a second time in about two hours. The effect of the mixture had nearly subsided, and the pain at the pit of the stomach was return-

ing. Hot fomentations, with strong mustard water, had been applied in the meanwhile, by my directions, at the wrists; but they had hardly produced any reaction. As the patient was a very nervous subject, and easily alarmed, the continuation, and, indeed, the frequent return, of this vicarious gout in his stomach began to excite apprehension, in himself as well as in his relations; which determined me on having recourse to something more energetic, for the restoration of gout to its former quarters.

A counter-irritating lotion of the ammoniated kind was therefore proposed, its action explained, and its effect tried on both wrists. Owing to the previous application of mustard water, the parts were almost immediately acted upon by the ammoniated lotion, and an almost complete reaction took place in consequence—the gout retiring to the wrists, and the stomach becoming at the same time perfectly free from spasm. The wrists were blistered, and continued sore for some days; but the gouty pain ceased long before they had healed. It is a curious fact that this patient, whom I have often seen since in society, and two or three times also professionally, has never had another genuine and full attack of gout; but he is subject, instead, to periodical returns of a deep-seated wearing pain near the region of the pylorus, for which I have recommended the application of a small compress, saturated with the old lotion, whereby he invariably obtains relief from his suffering.

*** *Affecting the Head and the Œsophagus.*

CASE LXXXI.

John M——, Esq., aged about fifty-eight years, is subject to atonic gout, some of which he almost always carries about with him in his knees and his ankles. His digestion is much impaired; and unfortunately the patient attends but indifferently to it. Occasionally there is an almost entire failure of power in the limbs. There are small chalky deposits in the fingers, and the general symptoms of dyspepsia, with nervous depression, are at times very distressing. He had been under the care of many eminent physicians, among whom were Doctor Chambers and Doctor James Johnson; but he admitted that he seldom did justice to their directions. His object in applying to me on the 30th of June, 1837, was to ascertain to which of the Spas in Germany he might proceed for the cure of his complaint. After a mature consideration of his case, I recommended Wisbaden, and gave him the necessary directions for that purpose. As he, however, could not start immediately, and was at the same time suffering under a rather severe attack of his stomach symptoms, in consequence of some great dinners and a certain number of glasses of Champagne; and as there was also a white, puffy, gouty swelling in the right knee; Mr. ——— requested me to prescribe for him. I did so; and strictly defined his diet. On the morning of the following day I was sent

for in great haste to the neighbourhood of Belgrave square to see him, and the message bespoke alarm on the part of the relations of the patient. I found him scarcely able to speak, and under great consternation. A feeling of slight strangulation, of which he had complained the day before, he now stated to be excessive and insupportable; and yet he breathed with ease, and naturally. There was also a degree of corresponding pain at the pit of the stomach, and the head felt full, heavy, and throbbing. On examining the knee, it was found paler than usual, flabby, and not tender to the touch, unless the joint was squeezed very hard with both hands. The patient's anxiety was all about the throat. He either could or would not swallow for fear of suffocation; and he was inclined to think that he must have caught cold after returning from a late dinner on the preceding night. But the disorder was manifestly far different from a sore throat. It was a spasmodic contraction of the œsophagus, from metastatic gout; and the symptoms of head affection were also connected with that transference of the disease from the knees. On sending for me that morning, the patient, judging from his own feelings in the throat and head, expected that I would order bleeding, or at least leeches to the part; instead of which I applied an ammoniated lotion of moderate strength, which I had carried with me when sent for under alarm. In two minutes after its application to the throat, in the presence of his lady, the patient became able to swallow a glass of water with ease, and stated that he was quite well. Not liking to trust to this sudden amendment, I proceeded to apply the same counter-irritant, on a piece of flannel, to the instep of the right foot, which became red in a very few minutes. The flannel was left in its place through the day. At night I found my patient much better. The foot was not only inflamed, but a large blister had formed, containing at least half a pint of fluid, retained by the cuticle, which was as yet unbroken. From this time forward the case became one of ordinary derangement of the biliary system, in which, indeed, the attack of straggling or erratic gout had originated; and it was treated accordingly. The blister discharged its fluids two days afterwards, and was kept in action as an open sore for some days, in hopes that it might stand in lieu of a more active fit of the gout, of which the patient's unhinged constitution was incapable—and thus keep off, as it actually did, all returns of the more formidable symptoms in the throat and head.

2.—GENUINE GOUT.

The cases of genuine gout which I have treated in the course of the last nine years, by means of the external application of ammoniated counter-irritants, are both numerous and striking; but to specify them, much as they resemble one another, and familiar as the disease in its ordinary form must be to almost every one, would involve an unnecessary increase of the matter of this volume. I

have only to state, as a novel feature in the treatment I adopt—which I call the external treatment of gout, in contradistinction to that which consists in giving colchicum and other internal remedies—that on the appearance of the first blush on the toes, or other part attacked with gout, I apply a counter-irritant on the place, so as to immediately bring to a crisis the inflammatory action in which resides the sanative effect of gout; and I convert a series of capricious, uncertain, and unsteady pains, which left to themselves last several days, into an ordinary form of local disease, easily managed, and specifically under our control; performing most completely the vicarious office of gout in promoting constitutional health. I seldom, if ever, have recourse to colchicum. I prefer other safer sedatives; and I look to a judicious, proper, and effective clearance of the digestive organs, for a successful termination of the attack in a much shorter time than under any other treatment. Another great feature of the external treatment is, that in the majority of the patients who have submitted to it, the attacks of genuine gout have been of much rarer occurrence after the first recovery.

3.—PARALYTIC DEBILITY.

CASE LXXXII.

Paralytic affection of the left arm.

The late M. Laurière, an eminent jeweller, living in St. James's street, having been labouring for some time under a paralytic affection of the left arm, subsequently to a more regular attack of palsy, was placed under my care at the desire of a benevolent foreign nobleman now no more, on the 27th of January, 1831. I continued to see him daily for a week, and afterwards from time to time until his complaint appeared to be mending, notwithstanding all the very unpromising symptoms which accompanied his case. His advanced age, and the serious nature of the attack he had experienced in the head, seemed to preclude all hope of a recovery. Still as the lifeless condition of his left arm was an annoyance as well as an inconvenience to him, I subjected it to friction with an ammoniated lotion; while at the same time I applied that counter-irritant to the spine between the shoulders. I was very soon after gratified at the result of this method of rousing the energies of the upper extremity; which recovered its tone and faculty so far that M. Laurière could raise it without helping it by means of the other hand, as he had always been obliged to do before.

CASE LXXXIII.

Paralytic affection of the left side of the body. (Hemiplegia.)

A lady whom I was attending in March, 1837, requested me to prescribe for P. Weston, a young man, the brother of her maid, who had been for some time afflicted with a paralytic affection of the whole of the left side. With difficulty he hobbled into my room on the 11th of March, and related his story, which seemed to refer to some general attack of palsy he had sustained a few months before. At present his state was this: He had an odd sensation on one side of the head, different from that of the opposite side; the left side of the face was rather drawn, the muscles of the throat being also somewhat contracted; the left arm, which was partially wasted, lay perfectly inanimate and almost deprived of feeling, by the side of the body. It did not impart to the touch the sensation of cold, although the hand was always clammy, and cooler than the rest of the body. If by laying hold of the fingers the arm was raised to a horizontal level, and then let go, it would fall to its former position, in the manner of the arm of one of those dislocated toy-clowns and pasteboard harlequins which form the delight of children. Weston had not the slightest power to exercise his own will in regard to that arm, or to retain it in the horizontal position a single instant. Even when helped by the right hand, the paralytic extremity could never be raised quite to the level of the head, as if there existed a stiff or anchylosed joint at the shoulder. Coming now to the hips, the thighs, and the legs, I found the same prevailing weakness of muscles and inability to exert them at will—the lame limb only following the other in a dragging way. With all this, there was great derangement of the whole system, an affection of the head approaching to fulness, and considerable difficulty in overcoming the torpor of the digestive organs. In the course of a month or two, however, the more general symptoms of morbid action were set to rights; a degree of ease was enjoyed; and at the end of ten weeks he was in much better health. Still the arm partook not of the general improvement. At length I directed that frictions should be made with a flannel dipped in a strong ammoniated counter-irritant, and that the same should be done to the back, and to the lower extremities. The consequence of all these operations was, that the patient gradually regained the active use of his leg and foot; that he lost those peculiarly odd sensations which he had experienced in the head; and finally that he was able, at the expiration of a few months (during which he went through a course of warm sea-bathing at Margate), to grasp my hand tight enough to give me pain, and to raise his left arm, unassisted, as high as, and even higher than, and over his head. He has since returned to his duties as clerk in a public office.

CASE LXXXIV.

Paralytic squinting. (Strabismus paralyticus.)

This was a curious as well as an interesting case. It occurred in the person of a young lady of much personal attraction, Miss N——n, aged twenty-one years, who about a year before began to find her vision gradually impaired, without any manifest cause. It became at last so deficient that she was compelled to consult Mr. Alexander; and that very expert oculist gave it as his opinion that the young lady was threatened with gutta serena. Every means were accordingly employed to check the progress of such an appalling and distressing malady. In the midst of these, Miss N——n awoke one morning (20th of February, 1832), seeing double, and to all appearance squinting, in the estimation of those who looked at her. Both the transparent corneas and pupils were drawn at the same time towards the inner angles of the orbits, or thrust simultaneously to the two opposite corners. In the execution of both these movements, the young lady experienced a sort of difficulty, as if the antagonist muscles were powerless as well as unharmonious; and there was a general debility also in the eyelids. The previous history of Miss N——'s complaint, the opinion given by her oculist, and the general habit of fulness observable in her, induced me to think that the case was one of paralytic debility, dependent on pressure from a congested state of the blood-vessels. I therefore ordered a free cupping at the back of the neck; immediately after which an ammoniated counter-irritant was applied behind both ears, and on both temples, and the strabismus ceased from that moment. A repetition of ordinary blistering threads placed behind the ears for the space of three months, ultimately restored most completely the natural power of the vision.

I have selected, almost at random, from a list of several similar cases, the three preceding histories of paralytic debility relieved by ammoniated counter-irritants,—in order to show what immediate aid may be derived from their use. I might without difficulty multiply these examples, did I not prefer to make room for evidence from another quarter in support of my assertion, since the disinterested feelings of two of my professional brethren enable me so to do. I shall therefore introduce in this place the statement of a much-esteemed practitioner at Southampton, giving an account of the results obtained by his father, a very experienced surgeon, from the use of the same counter-irritants, and in the same complaints, in order that I may corroborate my own practice by his, on this point. The statement is contained in a letter dated so recently as the 20th of May, of this year; and although it refers to the advantage of employing the same ammoniated agents in those diseases to which I have already fully referred, my readers will pardon me for introducing the largest portion of it in this place, as it will serve

to substantiate many of the positions laid down in the second part of this volume.

" * * * * * My father desires me to inform you that he has been an earnest advocate for counter-irritation, as long as he has been in practice, but that he had always felt distressed at the painful means resorted to for the production of that effect. Since, however, the ammoniated counter-irritant, you recommended has been introduced to his notice, he has been enabled to resort to that mode of treatment with considerable less hesitation, from the prompt, efficient, and "*elegant*" manner in which that medicine acts. He has been so much and so generally accustomed to make use of it, that he has not reserved any notes of his experience; but we have both been in the habit of applying it, either remotely or proximately, with much success in most neuralgic affections, in cases of chronic rheumatism, *in paralysis occurring in debilitated constitutions*, in all pains of the abdomen or thorax when unaccompanied by inflammation, and, indeed, in some cases of inflammation also, such as affections of the chest in children, &c. &c. Our experience of the results on all such occasions enables us to state that its use is often highly beneficial. My father was called to a gentleman, aged fifty-six years, who had lived freely, and who was unable to use the lower extremities. The ammoniated lotion was applied over the sacrum, and in succession down the course of the nerves. A little of the same medicine, in a diluted form, was also taken internally. Some movement was soon perceived, and by perseverance in this plan the power of locomotion returned entirely. Vesication was in no instance produced. My father has also found it an efficient auxiliary, in loss of power in the upper extremities, when consequent on chylopoetic derangement. He also thinks that it has afforded relief in cases of *spasmodic asthma*, when applied on the spine. A short time previous to his illness my father had three cases in which the ammoniated lotion was applied successfully during the different periods of pregnancy. The first was at an early period of gestation, in which the occurrence of continued sickness was considerably relieved, and in some instances the paroxysm checked, by the application of the lotion, sometimes to the epigastrium, at other times to the lower dorsal vertebræ. The second case was in the more advanced stage, where the sickness was also diminished, and much comfort derived in various pains over the abdomen and down the sides. These were mitigated by your ammoniated lotion, although they had resisted more active remedies on former occasions. In the third case there was not sickness, but spasms and anomalous pains about the sternum, epigastrium, and hypochondria, which were always removed by the application of the same remedy. In none of these cases the counter-irritant was allowed to vesicate; and I have to add that we use it with lint and oil silk.

"You are most completely at liberty to make any use of this that

you may be able; and we may indeed hope to see, through your exertions, the use of counter-irritation become more general. With my father's best compliments I have the honour," &c. &c.

(Signed)

"E. H. MAUL."

I take this opportunity of publicly thanking the highly-educated and liberal-minded writer of the preceding letter, and his respected father, with whom I have had professional intercourse during a space of twenty years, for having thus come forward in behalf of medical science and humanity, to tender their testimony of the value of counter-irritation, as recommended by myself; a testimony which in the fullest manner corroborates all that I have advanced on that subject in the body of the present work.

SECTION V.

CASES OF ACCIDENTS; MECHANICAL, CUTANEOUS, AND OTHER MORBID DERANGEMENTS.

I.—VIOLENT SPRAINS, BLOWS, AND FALLS.

Nothing is more troublesome than what is termed "a sprain," although the accident be in general looked up as insignificant. How many people have been confined to their couch for days and weeks together, from a mere sprain of the foot or ankle! How many more have been obliged to tie up their arm, or bind up their wrists, from a sprain of the shoulder, or a sprain of the hand! Leeches, evaporating lotions, fomentations, bandaging, patience, and time—time long and precious—these are the usual means which surgery employs to overcome the ill effects of a sprain. Now I will not scruple to assert that if an ammoniated counter-irritant, of a strength suitable to the exigency of the case, and to the individual susceptibility of the skin of the patient, be had recourse to *immediately after* a sprain has taken place, no matter how violent, the recovery in almost every instance will be immediate; and neither leeches, bleeding, nor confinement will be required. Nay—I can state further, that in a large number of instances, in which a sprain had existed for some days, and seemed to advance but little towards recovery under the ordinary modes of treatment, even the tardy application of an ammoniated counter-irritant has materially hastened that desirable event.

What is here affirmed respecting sprains applies with equal truth to the ill effects resulting from blows or falls, where there is only contusion, without either wounds or fractures. A violent blow, which when left to itself produces, in half an hour, a considerable puffing or swelling of the part, and discolouration of the skin, will be followed by no such results, if an ammoniated counter-irritant be immediately

applied to the part. Of course in the management of all such cases, even more than in that of the more important cases already detailed in the present volume, it is necessary that the practitioner should judiciously apportion the strength of spirituous and camphorated liquids, with the highly concentrated solution of ammonia he means to employ as counter-irritants; in as much as the skin is then either in a very irritable condition, or the reverse,—according to the degree of injury sustained.

CASE LXXXV.

Sprained ankle with swelling and incipient inflammation.

A young lady, rather inclined to excessive embonpoint, of heavy weight, and naturally very shortsighted, had, in consequence of the latter defect, sustained on many occasions bruises and sprains from falls and otherwise, which, without injuring the skin, had proved very troublesome, and often painful. Leeches and embrocations had been the usual means resorted to, to obviate the ill effects of all such accidents. On one particular occasion, (23d July, 1832,) I happened to be in the house in which she was staying for a few days as a visiter, when she was brought in from the garden, having, while in the act of running fast along a gravel walk, twisted her right ankle under her, and fallen on her side. In the evening the right leg, from the instep upwards, was found much swollen; the skin was tense and hot; and pulsation of the vessels very distinctly marked. The part was, moreover, not only tender to the touch, but permanently painful; so much so that it was by her friends imagined she had dislocated the ankle joint. On the knee and hip of the same side there were marks of bruises also, and the places felt quite tender. Before I left the house that morning, I recommended immediate and absolute rest in the horizontal posture, with frictions of arquebusade water on the parts; not knowing whether the injury sustained would proceed to any great extent. When however it was found in the evening that matters seemed to become more serious than I had anticipated, and that all attempts to put the leg down and press the foot to the ground produced great pain, my attendance was again requested by the poor lady herself, who became fearful lest she should be confined in a friend's house for a long time, as had been the case before, under similar accidents, and thus become a troublesome guest, by turning a visit of a few days into a sojourn of some weeks. The external appearance of the leg, and particularly the redness and tightness of the skin, would have tempted me under ordinary circumstances to prescribe the application of several leeches, and some embrocation afterwards; but I knew such a course would not greatly expedite her recovery, and the object in this case was to shorten the usual period of confinement. With confidence therefore I recommended a moderately strong ammoniated lotion, all over the leg and instep, which was applied and kept on for five minutes. It took away the inward

pain in that time, though it augmented apparently the external soreness and redness of the skin. After the lapse of half an hour from the first application, seeing that no blister was produced (none being desirable) I repeated the lotion, considerably diluted, and recommended that the compress should be suffered to remain on the leg during the night. The lady of the house, under my instruction, applied that same night similar compresses, with the diluted lotion, to the bruises on the knee and hips. On the following morning every thing had returned to its natural state, the swelling and redness had disappeared, and the patient could put her foot to the ground and walk without inconvenience.

CASE LXXXVI.

Sprained wrist.

On the 19th of November, 1830, the late Sir Robert Russel, Bart. M. P., of Chequers, in the county of Bucks, whom I had often had occasion to attend professionally, came to my house with his right arm in a sling. His hand was much swollen; the wrist, tender and painful to the touch, was about twice its natural size; and above it, the muscles were also sore and somewhat swollen. By the recent marks around the wrist, I perceived that several leeches had been applied, over which he was then wearing a thick compress with some camphorated liniment. The cause of all this apparent mischief, he informed me, was a violent sprain of the wrist, occasioned by attempting to catch with one hand a large heavy folio volume while it was in the act of falling off the table. The condition of the parts here described had lasted three days, and the patient was getting fidgety at the little prospect he saw before him of a speedy recovery; the more so as in the then excited state of the House of Commons, when a change of ministry was expected in three or four days, he was particularly anxious to be in his place. I recommended, therefore, and applied immediately, an ammoniated embrocation, of an ordinary strength. Being impatient of additional pain, he at first refused to allow the application to remain on more than two or three minutes; but having at last consented to bear it for a short time longer, tightly bound round the wrist, the smarting gradually diminished, and he took his leave with the wrist quite easy. On the following day I saw him at his chambers in Stone Buildings, with the arm out of the sling, and declaring he was quite well.

CASE LXXXVII.

Sprained shoulder.

A lady, residing in the Royal Mint, somewhat advanced in years, sprained her shoulder in October, 1833, by falling in the dark over a piece of furniture which had been incautiously left in the middle of a room. The parts swelled much in the course of the night, and became very painful. The uneasiness extended down

to the elbow, and also in the direction of the muscles of the breast. I saw her in the morning; she could not then raise her arm to a perfectly horizontal position, and when it was forced into that state, much pain was produced. I applied at once the ammoniated counter-irritant for a few minutes; when considerable smarting and rubefaction followed, with great relief of the external pain and greater facility of movement. The application being repeated for three days successively with proportionate benefit, the part at the end of that time had recovered its natural tone and condition.

CASE LXXXVIII.

Sprained instep of long standing.

In April, 1835, the groom of a gentleman in Upper Grosvenor-street, a member of whose family I was then attending, asked my advice in consequence of his suffering excruciating pain in the right instep, from an old sprain. This, besides having been neglected, had lately been greatly exasperated by his having had occasion to start suddenly out of bed, and walk across a cold flagged pavement, with naked and hot feet; in doing which he had twisted the lame foot. He now could neither put his foot to the ground, nor into a stirrup, and was consequently lying idle and useless. He had used various means to get well, but to no purpose. I desired him to procure a small quantity of an ammoniated lotion, and the next morning showed him how to use it. After the first application, which lasted ten minutes, he told me he felt his foot better. At my desire he repeated the lotion three several times, at an interval of twenty-four hours, without raising a blister; and in less than a week from the date of the first application, this person was able to resume his usual duties.

CASE LXXXIX.

Another example of severe sprain of the instep.

The valet of Lord Nugent, in consequence of some accident of which I have omitted to make a memorandum, sustained a very severe sprain of one of his insteps, which disabled him from doing his usual duty; and compelled him to hop instead of walking, as he was perfectly incapable of putting the foot to the ground, so great was the pain he suffered in that part. Having asked my advice on the 27th of November, 1836, several days after the accident, while I was on a professional visit at the house, I examined the foot, which was hot to the touch, very much swollen, very tender, and evidently in a state of sub-acute inflammation. As he had already used every ordinary means in such cases recommended, I instructed him how to apply an ammoniated counter-irritating lotion, of which I gave him the prescription, and desired him to repeat it during three or four successive days if necessary. He did so, and at the end of the fourth day he reported himself quite well.

The preceding cases will, I think, be deemed quite sufficient, without multiplying them unnecessarily, to prove the efficacy of an instantaneous *revulsant* (rather than a counter-irritant), of the nature of those I recommended, in dispersing more effectually, and unquestionably much more rapidly, than by any other means, the ill effects of the local injuries therein detailed.

2.—BLOWS.

CASE XC.

Violent blow on one of the lower extremities, with supposed rupture of some muscular fibres.

Grosvenor-street, Monday, November 27, 1837.

"I believe it was in the beginning of the year 1831, that I received so much benefit from the application of a counter-irritating lotion you recommended. You are acquainted with the nature of the accident, from which I had been long confined.

"Very truly yours,

This note, which was addressed to me by a gentleman who had been formerly a colonel in the guards, and with whom I have been many years acquainted; refers to a very striking example of the value of the preparation mentioned by the patient, in relieving and ultimately curing, in the most perfect manner possible, even the most extensive, painful, and unpromising contusions from blows. The accident had occurred in the winter while hunting, and my attendance was first desired on the 8th of May, 1831. Not being able to look for my notes of the case in consequence of having forgotten the date of them, I had requested the colonel last year to state the time of my attendance; and his reply having enabled me afterwards to refer to my memoranda, I find that the history of the case was as follows:

Being out hunting, one morning, as before stated,—the colonel's horse refused to face a lofty gate, and, rearing, fell with his rider backward, the right leg and thigh remaining, for a minute or so, buried under the body of the horse, with the saddle and stirrup jammed between them. The colonel was disentangled from this perilous situation, and rose, but found he could not well keep that limb straight to the ground or walk upon it. Having at last succeeded in returning home, means were taken to ascertain whether any serious injury had been sustained. There was considerable pain in the middle and rather towards the upper and anterior part of the thigh; and in that place the injury seemed to have been considerable, judging from the degree of suffering and swelling which progressively manifested themselves, with an increased inability to move the limb. The patient, desirous of better advice,

came to London, and placed himself under the care of one of the most eminent and justly celebrated surgeons of the town. This gentleman gave it as his opinion that some of the bundles of muscular fibres which had sustained the weight of the horse had been ruptured, and that inflammation existed to a considerable extent. He recommended many judicious and valuable measures during a long attendance. Under this treatment it is probable that the more serious consequences which might have ensued from so extensive an injury, were prevented; but in respect to pain, and the power of moving the limb, little or no progress had been made. It was stated that time alone would complete the recovery; but the period of it could not be fixed, and at all events would be distant. The regular attendance of the surgeon being now discontinued, and the patient being visited only by the apothecary of the family, I was requested to call on my friend on the 8th of May. I found him suffering very considerably from a deep-seated pain in the middle of the thigh; the part being at the same time tender to the touch, and presenting a singularly knotted feel to the finger, with something like fluctuation. The part seemed also swelled; and the limb, which was somewhat contracted near and about the knee, could not be stretched or used without considerable suffering. The patient generally quitted his bed every morning; was assisted to an arm-chair in the drawing-room; and kept the affected limb in an easy semi-inclined posture on pillows before him.

The general health had been well taken care of, and nothing but the local injury required assistance. Of this the colonel was extremely impatient, having, as he has stated in his note, "been long confined" from that injury. I explained my views of the case to the patient and his lady, and stated that nothing short of a revulsant-blister of great power, such as ammoniated lotions alone could produce, would restore the limb to its natural condition. I added that I could promise, at all events, from the application of one of those preparations to the thigh, a very speedy cessation of the inward wearing and unmitigated pain he had so long experienced. The proposal being assented to, a compress as large as the palm of a man's hand, of several folds, saturated with an ammoniated counter-irritating lotion of great strength was applied, and tightly bound down by a bandage. In the course of a quarter of an hour it raised a blister, which was suffered to remain intact for some time; and when at last the serum was let out, the vesication had assumed a very considerable size, and the fluid contents of it were of course large in proportion. A few hours after the application, the local inward pain was gone, and never after returned, except in slight twinges. The vesicated surface was properly dressed from day to day, and purposely kept open to encourage a discharge from it; and in less than a week from that time the limb was, comparatively speaking, a sound limb, capable of performing its duties. Exercise, however, of any extent, riding, or fatigue of any kind, were for some time interdicted; and in this manner the patient

went on recovering most completely ; so that at the end of seven days from the time of my being sent for I discontinued my attendance. The colonel has never suffered the slightest inconvenience since from that accident; although, upon any very marked change in the weather, he experiences a certain degree of uneasiness in the part formerly affected.

CASE XCI.

Severe blow on the nose.

Two young officers were playing at single-stick in a barrack-room, in March, 1834, when an unlucky blow, unskilfully aimed, and badly parried, fell on the bridge of the nose of one of the combatants. The part began immediately to swell, became red and painful, and the nose and part of the right cheek threatened to become much disfigured. This would have been a sad plight for parade ; and the ordinary routine of leeches and embrocation, besides being too slow and uncertain, offered little hopes of escaping disfigurement. Recollecting the sudden good effects which the ammoniated antidynous lotion had produced in the case of a severe sprain that had occurred to his sister, the sufferer instantly flew to his home, and there sought the relief of that same application. It was used accordingly, some degrees diluted, on the bridge of the nose and upper part of the cheek ; the eyes having previously been closed with two silk handkerchiefs, to prevent their being distressed by the pungent effluvia from the lotion. The compress was left on, I was informed, two minutes, and removed because it had produced great smarting. Finding, after a little while, that there was no reason to apprehend a blister, the compress, fresh wetted, was again applied for two minutes, and again removed. Lastly, it was re-applied a third time in the same manner, and equally without vesication ; when all vestige of inward soreness and swelling gradually and finally subsided, and no external ecchymosis or black mark ever made its appearance on the spot. There can be no doubt but that the young gentleman would have been disfigured for some days, had he taken any other means of obviating the results of his accident.

3.—FALLS.

CASE XCII.

Violent bruise of the knee.

A married lady, the sister of the gentleman alluded to in the last case but one, informed me on the 25th of May, 1835, that two or three days previously she had had a serious fall, in consequence of which her knee had received a violent bruise and was severely sprained. She complained that the parts had been getting worse,

until at last she neither could walk nor stand, the knee being much swollen and highly painful. The experience in her brother's case induced her to wish to try the same remedy, and on the fourth day of the accident, the lady having been nearly the whole of that time confined to one position, an application of one of the strongest preparations of ammoniated lotion was made to the part affected. The result was that Mrs. H—— was perfectly well the next day, and her limb quite sound.

CASE XCIII.

Fall from a lofty haystack.

Barnes, a robust square-set middle-aged man, a species of useful Caleb Quotum, or man of all work, residing in a nice village in Buckinghamshire, in which my family spent the summer months every year, fell, one day in July, 1830, from the top of a lofty haystack on my grounds, in the completion of which he was assisting. The fall luckily occurred in the erect posture, and was more like a slide down the side of the stack, by which he reached the ground on his feet. Both his ankles bent under him, and he fell prostrate, unable to rise. I happened to be spending a few days with my family at the time, and was soon on the spot, from whence I had the good man conveyed to his cottage. Having carefully examined both limbs, and found no fracture or real dislocation in any part, I directed my attention more particularly to the ankles, which were getting by this time rapidly swollen and painful. In a little more than half an hour those articulations were stiffened by the swelling, and Barnes could not in any way give them the slightest motion, when desired to try to do so. A bottle of the strongest ammoniated counter-irritant was now fetched from my house, and both ankles were surrounded with thick compresses three inches wide, wetted with it, and firmly bound down by silk handkerchiefs. The smarting and sensation of burning in the parts, produced by the application, were very severe, notwithstanding which I allowed the application to remain on till the compresses were dry. This occupied about three quarters of an hour; at the end of which period the swelling and pain had completely subsided, and the power of motion was restored to the limbs.

4.—BILES. FURUNCLES.

I am not about to recommend, in the cure of this species of troublesome eruptions, the use of any of the ammoniated counter-irritants. But, as the power of those agents in arresting inflammatory action of the cutaneous system and external swellings, is exhibited even when they have been misapplied, I deem it necessary to cite a single case of furuncular eruption, in which the progress of each bile was checked as fast as each made its appearance, by the application of a compress wetted with an ammoniated lotion. I

have said that I do not recommend such a practice, and for a very good reason, namely, that the checking of a growing bile, or the prevention of its maturation, serves only to transfer the disease from one part of the body to another; inasmuch as I have never seen that proceeding adopted in one place without its being followed by the appearance of the eruption in another; for nature will have its way, and where she is thwarted mischief ensues. This is precisely what occurred to a gentleman whose case I am about to relate, and to which allusion has already been made in the first part of this volume, at page 31, paragraph 81.

CASE XCIV.

Periodical appearances of Biles.

A gentleman formerly in the army, and now enjoying the *otium cum dignitate* in the lap of every comfort, has of late years become subject to a spring and autumn eruption of large biles, which sometimes attain considerable magnitude. They are evidently a safety-valve to him, and I believe he now, at last, thinks so himself. They generally appear on the head, behind the ears, in the nape of the neck, in the fleshy parts of the arm, and even in the fingers and other and lower parts of the body. Immediately before their outbreak, and for some days previous, my good friend becomes low-spirited, morose, and peevish, and discouraged at the smallest appearance of difficulty. In proportion as the safety-valve opens and acts freely on different points of the surface, the physical and the moral man both improve, and at last every thing would be *couleur de rose*, were it not for the pain of the local inflammation, the drawing of the suppurating plaster, and the squeezing hand of the friendly doctor trying to get the offending core out. These inconveniences, repeated during two or three seasons, proved rather too much for a gentleman who seldom experiences any, and would rather have none. Thinking to get the better of them, and with one and the same cunning trick to cheat both nature and the doctor, my friend, on the very first appearance of one of these furuncles, clapped upon it a compress with an ammoniated lotion, which he had heard me praise as a capital remedy to stop the progress of incipient inflammation. The effect was as he wished. That bile was quite spoiled by the lotion; it never went any further. But in a day or two a second showed itself, and it was treated in a similar manner, with a similar result. A third and a fourth followed, and they also were presently dismissed in the same cavalier-like manner. In fact, no eminence, however small, if red and painful, made its appearance, but the ammoniated agent was instantaneously made to exhibit its power in extinguishing it. Yet what did the self-medicating patient gain by this cutaneous phantasmagoria? Why, that by and by, instead of one,—three, four, and at last crops of half a dozen biles threw themselves out on his skin; and that instead of these being moderately large and

moderately painful, as before, they had now become larger and more exquisitely painful : and they also proved more troublesome to treat and to cure. Still the efficacy of a counter-irritating lotion upon them was manifest ; and for that reason alone I have mentioned this case.

5.—PIMPLES. CRUSTA LACTEA OF CHILDREN.

CASE XCV.

Troublesome periodical Pimples of the Lips.

Although I condemn, as I am in duty bound to do, the use of the remedy under consideration in such a case of eruption as the preceding, in which that eruption was evidently critical and for a good purpose, I am not to be understood to disapprove of its use in all cutaneous derangements. On the contrary, there are some which it is desirable to get rid of as soon as possible ; inasmuch as their presence can serve no good purpose. Such are, for example, those species of breakings out on the lips which one notices after severe fevers ; but some varieties of which, either in the shape of pimples with a white head, or of vesicles containing a thin fluid which spreads until the vesication of a great part of the lips has been the result, are the spontaneous produce of heat in the stomach, or of a cold, or of something else unknown. Now such eruptions as these one wishes to get rid of quickly, and with little trouble ; for they are not only disfiguring, but they are painful and inconvenient.

In a case of pimples of this sort, to which a gentleman, otherwise in good health, but very susceptible of cold, was frequently subject, the ammoniated revulsant was applied with complete success. No sooner does one of the little pimples appear on the lips, than it is touched with the stopper from the bottle of the strongest ammoniated counter-irritant, on which rests a volatile portion of that liquid. The part smarts for a little while, and at each application, which should be repeated if necessary a dozen times within a few hours, till the offending pimple is found to have quite disappeared. I can say from the experience of numerous cases of this kind, that the simple remedy here alluded to, will ever be found efficacious in arresting the complaint in question.

CASE XCVI.

Milky Tetter, or Crusta Lactea of Infants.

This is another cutaneous eruption which ought never to be meddled with incautiously ; for, by a sudden arrest of it through the means of the various external applications that have been recommended for that purpose, serious diseases of the brain, or some other and worse eruptions, have been occasioned. In em-

ploying, however, a counter-irritating lotion, which instead of repressing, evidently increases its action,—and by increasing it, in the case of a head-eruption of infants, cures the disease,—no possible mischief can arise from the use of that agent; as a discharge is promoted during the cure, which is the great protection in such cases. Where, however, any improper application has been used instead, and the original disease being thus repressed something worse has followed, the employment of an ammoniated counter-irritant will be found most efficacious in restoring equilibrium and saving the patient from danger. This is what is well illustrated by the case about to be related.

John Stokes, aged six months, was brought to the hospital for sick children, during my attendance there as principal physician, having had, at the age of one month, a large swelling of one of the parotid glands, which, after innumerable poultices, had been lanced, when a little discharge was procured from it. The opening healed immediately, and then an eruption appeared on the top of the head, which spread downwards on all sides, so as almost to cover the entire head like a cap. That eruption soon assumed its genuine character of *crusta favosa* or running tetter. The child in the mean time seemed well in other respects. The complaint continued for some months, when “a doctor” advised its being cured by means of goulard water; and he effected his purpose so well, that all discharge was soon arrested from the surface of the head, and the whole dried up. In lieu of it, however, there soon came on, all over the face and cheeks, the latter of which were considerably swollen in consequence, a miliary or pimply eruption, with some fever and much irritation. I instantly applied a moderately strong counter-irritating lotion all over the occipital region of the head and behind the ears, without any internal medicine. The discharge from the previously dried up tetter was then immediately reproduced, and all the miliary eruption on the face, as well as the fever which had accompanied it, disappeared. By means of the blistering lotion the original running tetter of the infant was also completely cured in less than a fortnight, without any subsequent inconvenience.

6.—CUTANEOUS PUSTULAR DISEASES.

The success which I was not long in obtaining in some eruptive diseases of the skin already mentioned, from the use of ammoniated counter-irritants, when once I had become properly acquainted with their power, induced me to employ them also in the most inveterate cases of figured ringworm of the scalp and other parts. It is notorious that this disease has been, and is still, looked upon as an opprobrium to the medical practitioner, as well as to the unfortunate patient. The ringworm, when properly studied, presents several curious features and anomalies. Hitherto no treatment has been recommended for it, the rationale of which can be

said to rest on sound physiological principles. All remedies proposed have been empirical: and as such they have as often failed as they have succeeded. There is scarcely a vegetable, a mineral, or an animal substance, that has not been recommended as an external remedy for the disease in question; and, in fact, no sooner is a new substance introduced into the *materia medica*, than the physician or surgeon who is called upon to remove so noxious a disorder as the ringworm, instantly presses it into his service, as an external application. Thus the iodide of sulphur has, within the last year or two, been recommended and employed for that purpose; as has been also the creosote. But the result has not been more encouraging than when other external remedial agents have been resorted to. Among the latter, blisters having been deemed beneficial by many practitioners, it was natural that I should try to combat the disorder in question, by means of preparations which I knew to act on the skin as vesicants. Accordingly, in several cases of ringworm in children which fell under my notice, whether of the *aggregated* form, or of the *circinnated* or *figured* form, I betook myself to the use of an ammoniated lotion of suitable strength, and have had ample reason to be satisfied with the result. I shall select out of several, one case only of the disorder, and offer it as a specimen of the rest.

CASE XCVII.

Ringworm, contracted at school, and quickly pervading the head, neck, and shoulders.

Master Herbert, —, under eleven years of age, the second son of a lady who is the subject of one of the cases of epilepsy detailed in this volume, was brought home from a preparatory school with symptoms of ringworm on the head. There were patches of recent as well as of old and dried up pustules among the hair, varying in shape and extent, from a cluster of three or four, to one of twenty and more such pustules; and these had made their appearance in the course of a few days after the use of a comb belonging to another child already affected with the disorder. On stripping the shoulders, back, and chest of the young gentleman, soon after he arrived in London, I found that the disorder had attacked the skin in those parts also. But here, instead of presenting the clustered scabs or punctated pustules, it offered the appearance of several rings, with undulating margins, varying in size and figure. The skin in the centre was in every way healthy, while the edges of the ring itself of the twentieth of an inch in width, were formed by minute pale yellow pustules, surrounded by an inflammatory blush. In the course of my attendance I had an opportunity of seeing the process by which these irregular geometrical figures became inscribed, as it were, on the skin; but as it is not the object of this work to give the natural history of this singularly untractable complaint, I shall simply confine myself to the description of

the treatment I employed for its removal. The whole of the head being shaved, washed with a strong solution of carbonate of soda afterwards, and freed from all desquamations or scabs, I proceeded to touch each single patch of the eruption on the scalp with a camel-hair brush dipped in the strongest of the ammoniated lotions—repeating the application two or three times in succession, until the patient complained of its burning. I followed the same process with the eruption on the back, shoulders, and chest; but here the smarting generally followed the first application. A blush, or red hue, invariably appeared after the use of the lotion; and for a very short time (when the general application was completed) the whole of the scalp and other parts affected seemed suffused with crimson. This appearance, however, soon vanished, and the child suffered no farther inconvenience from it for the day. At the expiration of a week, having noticed an immense improvement in the disease, I felt encouraged to use the lotion more frequently; for which purpose I instructed the old and careful nurse of the child to apply it. So effectually was this done by us, between the 1st of June, 1831, and the 19th of that month, that upon that day I took my leave, having had the satisfaction of reporting the child to his parents quite well of the ringworm. The disorder never afterwards returned. This cure was the more gratifying to me, as a young cousin of the child's, living not far from my house, who had contracted the same disorder in a similar manner, was undergoing at the same time, under physician and apothecary, a variety of treatments for its cure, including ink, pitch, tar, and blisters, none of which succeeded; so that the boy continued afflicted with the eruption for several months afterwards.

The attentive perusal of the present work will, I have every reason to believe, induce the reader to agree with me in deducing from the several propositions enunciated in the first part of this volume, and the hundred facts¹ detailed in the second, the following

CONCLUSIONS.

1st. That there exists a species of external treatment, by which a great many very important disorders of the human frame, hitherto considered as incurable, or difficult of cure, may be speedily and successfully cured without having recourse to internal remedies.

¹ With the three cases mentioned in Mr. Maul's letter, the total number of illustrative cases is *one hundred*, as stated in the title-page.

2d. That although, from time immemorial, several agents of known power have been and are still employed in the external treatment of diseases; nevertheless, the various ammoniated spirituous preparations described and recommended in the present volume, have never before been offered to the public, although they possess much greater energy for carrying on and expediting that treatment.

3d. That even where the diseases are of a nature to require the use of internal remedies, the same ammoniated spirituous preparations, externally used, will be found to be a most powerful auxiliary in hastening and securing the good effect of those remedies.

4th. That in several instances, by the rapid and almost instantaneous manner in which they act, the ammoniated spirituous preparations have been the means of saving life from imminent danger.

5th. That the principle on which all such external agents are supposed to act in the cure or alleviation of human maladies, has been termed COUNTER-IRRITATION; but that, in adopting such term, many of the phenomena which accompany the use of ammoniated external applications are still left unexplained.

6th and lastly. That by promoting a more general adoption of a counter-irritating or external treatment of disease, and thereby saving the constitution of patients from the pernicious effect of a polypharmacous treatment, a great service would be rendered to the public, and an important era established in the annals of practical medicine.

THE END.

APPENDIX

TO

GRANVILLE ON COUNTER-IRRITATION.

[Some well-merited strictures having been published on Dr. Granville for not having given, in the preceding pages, the precise formulæ employed by him in the cases which he narrates, the following communication was sent by him to the London Lancet, in the pages of which it appeared Oct. 27, 1838.

We give the letter in such form that it may be readily bound up as an appendix to Dr. Granville's publication.—*Ed.*]

Sir,—In my recent work on counter-irritation, I addressed the general reader more than my professional brethren, for reasons which are fully and openly stated in the preface, and which, I trust, will have their just weight when duly and impartially considered.

Having in the course of nine years experienced largely the benefit derived from a more effectual, as well as a more frequent and prompt use of counter-irritation, on the external parts of the body, in the treatment of many important diseases, it was natural that I should desire to propagate my conviction respecting that mode of treatment, among those who were likely to require it, namely, the public. But in order to enable the public generally to appreciate the value of a practice on which so little has been written in this country, and which, discarding the usual farago of medicaments, professes to accomplish much by very simple means, it was, above all other things, important that a plain and popular exposition of all the principles and facts appertaining to the question of counter-irritation, should be laid before the world. This could not have been effected by any work written in the language of the medical schools, nor by one exclusively addressed to the profession; for had the work been thus written, it must have remained a sealed volume to the most interested parties. The contrary course, therefore, was adopted. On the other hand, I had also to inform the public that there existed a new and more energetic combination of remedial agents, calculated to carry on and expedite the treatment of diseases by counter-irritation. But before I could so inform them, it became evidently necessary that a full and comprehensive review of the nature and effects of all the counter-irritating remedies hitherto known and usually employed should be given. In executing both tasks, it is manifest that, whatever value I might have been disposed to set on the manner and fulness of their performance, as likely to be of some little service, even to medical readers, there could have been nothing, in reality, in my performance that could be called intrinsically important to them, save a more intimate knowledge of the new agents to be employed, which might be reserved for a future communication through a more appropriate channel of publication. I therefore thought it right, for the present, to confine myself to a popular view of the matter, in order, as I stated in my preface, to prepare the general reader for a more frequent use of counter-irritation in many diseases in which it had never, or seldom, been employed. By so doing it appeared to me that the interest of medical science would be best promoted; and with that view, and for the purpose of facilitating the adoption of a counter-irritating or external treatment of disease, I named and described at length the class, nature, and effects of the particular counter-irritating agents I had found to be endowed with greater efficacy than any hitherto employed possessed, without entering into any further medical detail. This information I supported by a body of evidence, which I hoped would be deemed equally suited for the perusal of the professional and non-professional reader.

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Thus far I fulfilled a duty which every medical man owes society ; to have gone beyond it would have been a dangerous experiment, that of rendering the public independent of the medical faculty ; an experiment which no honest practitioner should ever attempt, inasmuch as it will always redound to the injury of the community. Having, therefore, named the agents I had employed to produce the striking effects which were illustrated by many cases brought forward on the occasion, I abstained from specifying the several pharmaceutical manipulations which properly belong to the profession, and with which the non-professional readers could have nothing to do. I contented myself, in fact, with simply stating, that "by merely regulating the several proportions of those agents, according to the nature and intensity of the case we have to treat," all that I predicted would be obtained. In this manner I threw the responsibility of the active treatment into the hands of the medical attendant, who alone could determine, according to the exigency of the case under his care, the proportion to be employed, from what he must have read, in common with his patient, of the effect produced by the agents in question, in the several sections of my work devoted to that subject.

But although my impression was, that the medical attendant, with the data I had given him, is competent to determine the proportions for himself, I felt at the same time, that in order to carry out my intention of seeing the practice of counter-irritation in the treatment of diseases spread wide among the profession (so that their experience of the new mode I have suggested and recommended for that treatment might confirm the views I have adopted respecting it), I had another duty to perform. That duty consists in giving publicity, through a professional journal, to the proportions of the ingredients used in preparing the ammoniated or counter-irritating lotion, which I had myself, in the course of the last nine years, employed most frequently, either as a vesicant, or as a simple counter-irritant, intended to arrest pain.

To several medical gentlemen resident in the country, who preferred being made acquainted at once with the proportions I myself employed, rather than try to ascertain them by their own experiments, I communicated the formula by letter ; and among the most recent of those communications I may mention one to Dr. Colley, of Cheltenham, who applied for it about three weeks since. To others of the profession, resident in London, I offered (as I now offer to any respectable medical person) to show the mixing of the ingredients in their several proportions, and even to exhibit some of the physiological effects on the skin produced by them. The chemist, too, who, from the first, has prepared the lotion for the use of my patients, was authorised by me, from the day of the publication of my work, to communicate the proportions to any of the faculty with whom he might be acquainted, and who might apply to him for that purpose. But these modes of propagating a useful invention in medicine are slow and imperfect, whereas that which a medical journal of high repute and extensive circulation offers, is the most effective and expeditious. I have, therefore, selected the *Lancet* for that purpose, being convinced, that, through its pages, my desire of putting my professional brethren in possession of the means to procure for themselves a remedial agent, which, I confidently expect, will afford them satisfaction, will be accomplished, even to the remotest parts of the country.

After perusing the following formula, and having judged of the strength of the compound lotion resulting from it, by the description given in my work of the powerful physiological effects it produces, your readers, sir, will agree with me that to have placed indiscriminately in the hands of the non-professional public such an agent would have been highly injudicious ; nay, I would say dangerous, considering what we have been witness to within the last few years in regard to counter-irritation, employed by an unskilful non-professional individual, ignorant of the principles and practice with which he ventured to meddle ; indeed, even to the medical profession, it

will not be an act of superfluous caution to tell them, that in the discrimination of the cases which may require the use of an ammoniated counter-irritating lotion; in the mode of applying it; in the estimation of its physiological effects; and, lastly, in the manner of treating the parts after its application, they had best follow implicitly the directions given at full length in sections iv. vi. vii. viii. and ix. of my volume on counter-irritation, and which it would be impossible to repeat in the columns of any journal.

I shall now proceed to describe the mode of preparing the two sorts of ammoniated lotions, each of different degree of power, usually employed by myself in the cases I have published, and conclude with one or two comments in illustration of the process.

Each kind of lotion consists of three ingredients:—

1st. *The strongest liquor of ammonia*, A;

2d. *Distilled spirit of rosemary*, B;

3d. *Spirit of camphor*, C.

PRELIMINARY STEPS.

A.

Saturate a given quantity of distilled water, contained in a glass receiver surrounded by ice, with ammoniacal gas, obtained in the usual way, from a mixture of equal parts of hydrochlorate of ammonia and recently slaked lime, both reduced to a fine powder. The water may be made to take up nearly 800 times its bulk of ammoniated gas under the circumstances described; its specific gravity will then be about 872, and 100 parts of it will contain 33 parts of real ammonia according to Sir H. Davy's tables. This solution of ammonia will, therefore, be more than three times the strength of the *liquor ammoniacæ* of the Pharmacopœia of London, 100 parts of which, at a specific gravity of 960, contains only 10 parts of real ammonia. I have, therefore, called mine "*liquor ammoniacæ fortissimus*."

B.

Take two pounds of the tips of small leaves of fresh rosemary, and eight pints of alcohol; leave the whole in infusion for twenty-four hours in a well-covered vessel, and after adding a sufficient quantity of water as will just prevent the empyreumatic smell, distil over *seven* pints. The Pharmacopœia of London directs the essential oil of rosemary to be distilled instead with rectified spirit. Such a preparation I found unsuited for my purpose.

C.

To four ounces of pure camphor add two pints of alcohol, so as to dissolve the camphor, which solution should be filtered. The present *tincture of camphor* of the Pharmacopœia of London contains one ounce more of that substance, and does not harmonise so well with my two other ingredients as the weaker preparation.

The three ingredients, thus prepared, every medical man should keep always ready at hand in well-stoppered glass bottles, so as to be able to make, extemporaneously, a counter-irritating lotion of any requisite strength, according to the nature of the case requiring that application on extraordinary occasions. But for the ordinary purposes detailed in my work it will be better to keep both a milder and a stronger ammoniated lotion ready prepared for use.

The Milder Ammoniated Lotion.

Assuming the quantity of lotion desired to be divided into *eight* parts, then the proportions of the ingredients will stand thus:—

A—four eighths; B—three eighths; C—one eighth.

The Stronger Ammoniated Lotion.

If the quantity desired be also divided into eight parts, then the proportions of the ingredients run as follow:—

A—five eighths; B—two eighths; C—one eighth.

Although the changes of proportion here may be deemed trifling, yet the strength of the lotion is such that I never employ it except in cases of apoplexy, and for the purpose of cauterisation.

Directions in Mixing the Ingredients.

A and B are gradually mixed together. The mixture becomes opalescent and somewhat turbid, and a peculiar highly-agreeable ethereal smell is given out, different from the individual odour of either ingredient, although the extreme pungency of the ammonia be still discernible. I have strong reasons to believe, that at this point of the operation some particular change takes place, which imparts to the mixture of the two ingredients some of its valuable peculiarities as a counter-irritant described in my work; but what that change is, it is not my business to enter upon in this place: suffice it to say, that in a great number of experiments made with the ingredients separately (for each of them acts as a counter-irritant on the skin) and with them combined, the effects were uniformly different; those in the former case being found unequal to the production of those complete results which I trust I have justly promised to the profession. Ammonia alone (however strong) will not give rise to the effects I have described, though it has often stopped internal pain and produced *small little blisters*; but never has it succeeded in almost immediately producing a full vesication, as I have seldom failed to produce with the two ingredients mixed together, particularly after the third ingredient has been added.

Before, however, that third ingredient is so added, it is desirable to clear the previous mixture, by the addition of a small quantity of alcohol, and to set the whole in a cool place. All the various precautions here mentioned may, upon an emergency, be dispensed with, when an immediate action is required, either to arrest pain or relieve deep-seated inflammation. But for the more delicate uses, particularly for instantaneous vesication, the preparation should be obtained in the manner I have specified.

The lotion must always be kept in bottles with a glass stopper; and their whole virtue depends on the accurate distillation and preparation of the ingredients, as well as on the careful admixture of the latter. The species of ethereal principle formed during the admixture remains present in the lotion, but it is apt to vanish if the bottle be frequently opened, and then much of the peculiar effect of the counter-irritation is impaired. It is one of the many recommendations of these powerful preparations, that their effluvia, besides being agreeable, are of precisely that nature which is most likely to revive and benefit the patients labouring under diseases that require the application of counter-irritants. The compound camphor liniment is the only known combination of ingredients nearly similar to the ammoniated lotion just described. But the profession is well aware that the liniment will not produce, and never has produced, the effects I have predicated.

Among those effects, one of the most surprising is that of giving rise, in a space of time varying only between three and ten minutes, and in almost every instance (if such a result be the desired object), to as ample and full a vesication as can be expected in as many hours from the best Spanish flies. This is a result which I am not aware has been obtained before in so short a time, except by boiling water (a remedy not quite so pleasant as the odour of ammonia); and on it, therefore, as well as upon its importance in the treatment of many serious disorders, I do take my stand, as also upon that of arresting nervous and muscular pain, almost immediately, provided it does not depend on structural disease.

Requesting you to take a note of these facts and assertions, and of their date, I remain your obedient servant,

A. B. GRANVILLE, M. D.

Grafton street, Oct. 22, 1838.

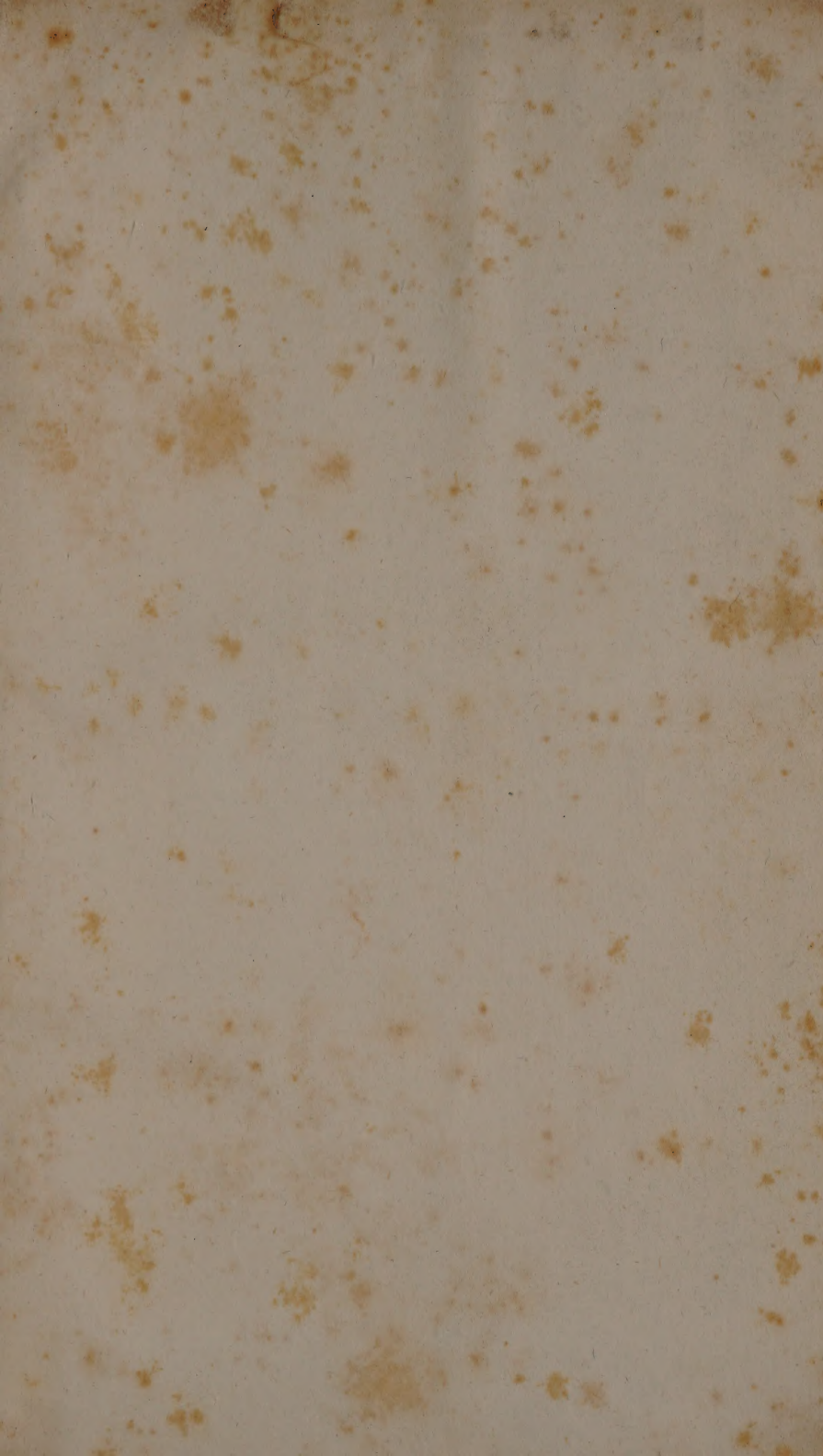
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